Three marine exhaust hoses from Shields Marine Hose have qualified for Lloyd’s Register Type Approval. This certification provides unbiased, third party confirmation worldwide that these Shields exhaust hoses meet the highest standards of production quality. Certification ensures the proper level of product safety and inspires user confidence.

**APPROVED HOSES:**
- Shieldsflex II Marine Exhaust/Water Hose (with wire) – Series No. 250
- Shields’ Marine Exhaust/Water Hose (no wire) – Series No. 200
- Shieldsaust-C Hose – Series No. 252.
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FUEL WATER SEPARATORS

Ethanol blended fuel absorbs more water and loosens more particulants than regular fuels. Proper filtration is required for every horsepower engine. Sierra fuel water separators remove over 98.8% of emulsified water from your gasoline. Sierra's 10 micron filters are over 90% efficient at removing particles as small as 10 micron. All filters flow at 90 GPH to feed even the hungriest motor. Sierra 10 micron filters are recommended to prevent damage to sensitive inboard and outboard fuel injection systems.

FILTERS

<table>
<thead>
<tr>
<th>PART #</th>
<th>DESCRIPTION</th>
<th>RATING</th>
</tr>
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<tbody>
<tr>
<td>18-7866</td>
<td>Extra Capacity - 6”</td>
<td>10 Micron</td>
</tr>
<tr>
<td>18-7944</td>
<td>Short - 3.88”</td>
<td>10 Micron</td>
</tr>
<tr>
<td>18-7945</td>
<td>Long - 4.35”</td>
<td>10 Micron</td>
</tr>
<tr>
<td>18-7845</td>
<td>Long - 4.35”</td>
<td>21 Micron</td>
</tr>
<tr>
<td>18-7865</td>
<td>Compact Filter</td>
<td>10 Micron</td>
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Available in standard packs of 12.

KITS

<table>
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<tr>
<th>PART #</th>
<th>DESCRIPTION</th>
<th>CONTAINS:</th>
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<tbody>
<tr>
<td>FWSKIT14AL10</td>
<td>Complete Kit - 1/4&quot; AL HD 4 1/2&quot;</td>
<td>(1) SUB-187852-1, (1) 18-7945, (2) 5153R</td>
</tr>
<tr>
<td>FWSKIT38AL10</td>
<td>Complete Kit - 3/8&quot; AL HD 4 1/2&quot;</td>
<td>(1) N-187775, (1) 18-7945, (2) N-184264</td>
</tr>
<tr>
<td>FWSKIT38SS10</td>
<td>Complete Kit - 3/8&quot; SS HD 4 1/2&quot;</td>
<td>(1) N-187776-1, (1) 18-7945, (2) N-184264</td>
</tr>
<tr>
<td>118-7852-1KIT</td>
<td>Bulk Pack 48 Kits 1/4&quot; Alum 1/4&quot;</td>
<td>(48) SUB-187852-1, (48) 18-7945, (96) 5153R</td>
</tr>
<tr>
<td>118-7986-1B-KIT</td>
<td>Bulk Pack 48 kits 1/4&quot; Alum</td>
<td>(48) SUB-187852-1, (48) 18-7945, (96) 5153R, (96) 118-500-3814</td>
</tr>
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</table>

BRACKETS

Sierra brackets are precision machined powder coated aluminum or marine grade stainless steel. They are available with 3/8” or 1/4” inlets.

<table>
<thead>
<tr>
<th>PART #</th>
<th>PART # BOXED</th>
<th>DESCRIPTION</th>
<th>STANDARD PACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-187776-1</td>
<td>18-7776</td>
<td>3/8” Thread Stainless Steel</td>
<td>14</td>
</tr>
<tr>
<td>N-187777-1</td>
<td>18-7777</td>
<td>1/4” Thread Stainless Steel</td>
<td>14</td>
</tr>
<tr>
<td>N-187775</td>
<td>18-7775</td>
<td>3/8” Thread Aluminum</td>
<td>48</td>
</tr>
<tr>
<td>SUB-187852-1</td>
<td>18-7853-1</td>
<td>1/4” Thread Aluminum</td>
<td>48</td>
</tr>
<tr>
<td>N-187774S</td>
<td>18-7774</td>
<td>1/4” Thread Aluminum (Compact)</td>
<td>60</td>
</tr>
<tr>
<td>N-184264</td>
<td>18-4264</td>
<td>3/8” Pipe Plugs</td>
<td>—</td>
</tr>
<tr>
<td>5153R</td>
<td>18-4256</td>
<td>1/4” Pipe Plugs</td>
<td>—</td>
</tr>
</tbody>
</table>
PRIMER BULBS

Sierra is a leading supplier of primer bulbs to the marine aftermarket. Fluoropolymer compounding allows for superior resistance to ethanol fuels. All bulbs sold for gasoline are certified by EPA and CARB (California Air Resources Board). We use double check valves with swell resistant fluoropolymer balls to prevent sticking.

<table>
<thead>
<tr>
<th>PART #</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUB-188002EP-1</td>
<td>Primer bulb for 1/4&quot; hose</td>
</tr>
<tr>
<td>SUB-188004EP-1</td>
<td>Primer bulb for 5/16&quot; hose</td>
</tr>
<tr>
<td>SUB-188005EP-1</td>
<td>Primer bulb for 3/8&quot; hose</td>
</tr>
</tbody>
</table>

CUSTOM FUEL LINE ASSEMBLIES

- Sierra can fabricate custom assemblies for OEM applications.
- Any combination of hose and fittings is possible.
- Use type A hose to the splash well and type B hose to the engine.
- Customizable length.
- Inlet can be 3/8" with 5/16" outlet.
- Numerous OEM connectors available.
CLAMPS

18-9145
OETIKER CLAMP KIT
Replaces: Yamaha YB-6AW04-A
Fits: All F115-F350 and HPDI Models.
Kit includes:

<table>
<thead>
<tr>
<th>PART #</th>
<th>MM</th>
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</thead>
<tbody>
<tr>
<td>N-189146</td>
<td>19.8 mm</td>
</tr>
<tr>
<td>N-189133</td>
<td>15.7 mm</td>
</tr>
<tr>
<td>18-9141</td>
<td>Pincers</td>
</tr>
</tbody>
</table>

Package of 10, available individually.

18-9125
OETIKER CLAMP KIT
Replaces: Johnson Evinrude 787133, 787145
Kit includes:

<table>
<thead>
<tr>
<th>PART #</th>
<th>MM</th>
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</thead>
<tbody>
<tr>
<td>N-189126</td>
<td>9.5 mm</td>
</tr>
<tr>
<td>N-189127</td>
<td>10.5 mm</td>
</tr>
<tr>
<td>N-189128</td>
<td>11.3 mm</td>
</tr>
<tr>
<td>N-189129</td>
<td>13.3 mm</td>
</tr>
<tr>
<td>N-189130</td>
<td>13.8 mm</td>
</tr>
<tr>
<td>N-189131</td>
<td>14.0 mm</td>
</tr>
<tr>
<td>N-189132</td>
<td>14.5 mm</td>
</tr>
<tr>
<td>N-189133</td>
<td>15.7 mm</td>
</tr>
<tr>
<td>N-189134</td>
<td>17.0 mm</td>
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<tr>
<td>N-189135</td>
<td>21.0 mm</td>
</tr>
<tr>
<td>N-189136</td>
<td>25.6 mm</td>
</tr>
<tr>
<td>N-189137</td>
<td>30.1 mm</td>
</tr>
<tr>
<td>N-189138</td>
<td>31.6 mm</td>
</tr>
<tr>
<td>N-189139</td>
<td>41.0 mm</td>
</tr>
<tr>
<td>N-189140</td>
<td>18.5 mm</td>
</tr>
<tr>
<td>18-9141</td>
<td>Pincers</td>
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</table>

SHUT OFF VALVES

Note: T-bolt Clamps and Worm Drive Clamps can be found on Page 62
IGNITION SWITCHES

Sierra offers the most complete selection of high quality polyester and brass ignition switches for the marine industry.

Marine grade glass-filled polyester switches

- Maximum corrosion protection – eliminates oxidation
- Inner seal between cylinder lock and contact plate
- Non-conductive housing eliminates potential shorts
- 20 Amp rating
- 2, 3 and 4 position switches
- Switches for magneto and conventional ignitions

Brass ignition switches

- Corrosion resistant construction
- Up to 15 Amp rating
- 2, 3 and 4 position switches
- Switches for magneto and conventional ignitions

4 POSITION CONVENTIONAL - ACCESSORY - OFF - RUN - START

**MP39802 – BULK 100 PCS/CTN**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>Material</td>
<td>Polyester</td>
</tr>
<tr>
<td>Length</td>
<td>Long: 1 1/8” maximum panel thickness</td>
</tr>
<tr>
<td>Terminal Type</td>
<td>4 Blade</td>
</tr>
<tr>
<td>Back Up Nut</td>
<td>Brass</td>
</tr>
<tr>
<td>Face Nut</td>
<td>Hex black plastic face nut</td>
</tr>
<tr>
<td>Hole Size</td>
<td>7/8”</td>
</tr>
<tr>
<td>Rated Ignition</td>
<td>15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Rated Solenoid</td>
<td>30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Rated Accessory</td>
<td>15 Amp @ 12v DC</td>
</tr>
</tbody>
</table>

**MP41042 – BULK 100 PCS/CTN**

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<thead>
<tr>
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<tbody>
<tr>
<td>Material</td>
<td>Polyester</td>
</tr>
<tr>
<td>Length</td>
<td>Long: 1 1/8” maximum panel thickness</td>
</tr>
<tr>
<td>Terminal Type</td>
<td>4 Screw Tab</td>
</tr>
<tr>
<td>Back Up Nut</td>
<td>Brass</td>
</tr>
<tr>
<td>Face Nut</td>
<td>Knurled black plastic w/rubber cap</td>
</tr>
<tr>
<td>Hole Size</td>
<td>7/8”</td>
</tr>
<tr>
<td>Rated Ignition</td>
<td>15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Rated Solenoid</td>
<td>30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Rated Accessory</td>
<td>15 Amp @ 12v DC</td>
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**MP39072 – BULK 100 PCS/CTN**

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<tbody>
<tr>
<td>Material</td>
<td>Brass</td>
</tr>
<tr>
<td>Length</td>
<td>Long: 1” maximum panel thickness</td>
</tr>
<tr>
<td>Terminal Type</td>
<td>4 Screw Tab</td>
</tr>
<tr>
<td>Back Up Nut</td>
<td>Brass</td>
</tr>
<tr>
<td>Face Nut</td>
<td>Knurled black chrome w/rubber cap</td>
</tr>
<tr>
<td>Hole Size</td>
<td>7/8”</td>
</tr>
<tr>
<td>Rated Ignition</td>
<td>15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Rated Solenoid</td>
<td>30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Rated Accessory</td>
<td>15 Amp @ 12v DC</td>
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**MP39072-1 – BULK 100 PCS/CTN**

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<tr>
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<tr>
<td>Length</td>
<td>Long: 1 1/8” maximum panel thickness</td>
</tr>
<tr>
<td>Terminal Type</td>
<td>4 Color Code Wires</td>
</tr>
<tr>
<td>Back Up Nut</td>
<td>Brass</td>
</tr>
<tr>
<td>Face Nut</td>
<td>Knurled black plastic w/rubber cap</td>
</tr>
<tr>
<td>Hole Size</td>
<td>7/8”</td>
</tr>
<tr>
<td>Rated Ignition</td>
<td>15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Rated Solenoid</td>
<td>30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Rated Accessory</td>
<td>15 Amp @ 12v DC</td>
</tr>
</tbody>
</table>

WIRE & DIAGRAM COLOR CODES

- Red - Battery
- Black - Magneto Ground
- Yellow w/ Red Stripe - Solenoid
- Black w/ Yellow Stripe - Magneto
- Purple - Ignition
- Purple w/ White Stripe - Accessory
- Yellow w/ Black Stripe - Choke
4 POSITION CONVENTIONAL - ACCESSORY - OFF - RUN - START (CONTINUED)

<table>
<thead>
<tr>
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<tr>
<td>Terminal Type</td>
</tr>
<tr>
<td>Back Up Nut</td>
</tr>
<tr>
<td>Face Nut</td>
</tr>
<tr>
<td>Hole Size</td>
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<tr>
<td>Rated</td>
</tr>
<tr>
<td>Ignition</td>
</tr>
<tr>
<td>Solenoid</td>
</tr>
<tr>
<td>Accessory</td>
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3 POSITION CONVENTIONAL - OFF - RUN - START

<table>
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</thead>
<tbody>
<tr>
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<td>Length</td>
</tr>
<tr>
<td>Terminal Type</td>
</tr>
<tr>
<td>Back Up Nut</td>
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<tr>
<td>Face Nut</td>
</tr>
<tr>
<td>Hole Size</td>
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<tr>
<td>Ignition</td>
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<tr>
<td>Solenoid</td>
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<table>
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<td>Length</td>
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<tr>
<td>Terminal Type</td>
</tr>
<tr>
<td>Back Up Nut</td>
</tr>
<tr>
<td>Face Nut</td>
</tr>
<tr>
<td>Hole Size</td>
</tr>
<tr>
<td>Rated</td>
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<tr>
<td>Ignition</td>
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<td>Solenoid</td>
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<table>
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<td>Face Nut</td>
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<tr>
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<td>Rated</td>
</tr>
<tr>
<td>Ignition</td>
</tr>
<tr>
<td>Solenoid</td>
</tr>
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<table>
<thead>
<tr>
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<tr>
<td>Terminal Type</td>
</tr>
<tr>
<td>Back Up Nut</td>
</tr>
<tr>
<td>Face Nut</td>
</tr>
<tr>
<td>Hole Size</td>
</tr>
<tr>
<td>Rated</td>
</tr>
<tr>
<td>Ignition</td>
</tr>
<tr>
<td>Solenoid</td>
</tr>
</tbody>
</table>

WIRE & DIAGRAM COLOR CODES

- Red - Battery
- Yellow w/ Red Stripe - Solenoid
- Purple - Ignition
- Purple w/ White Stripe - Accessory
- Black - Magneto Ground
- Black w/ Yellow Stripe - Magneto
- Yellow w/ Black Stripe - Choke
3 POSITION CONVENTIONAL - OFF - RUN - START (CONTINUED)

MP39202 – BULK 100 PCS/CTN

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<tr>
<td>Face Nut</td>
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MP39772 – BULK 100 PCS/CTN

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<td>Back Up Nut</td>
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<tr>
<td>Face Nut</td>
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<tr>
<td>Hole Size</td>
</tr>
<tr>
<td>Rated</td>
</tr>
</tbody>
</table>

MP41032 – BULK 100 PCS/CTN

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
</tr>
<tr>
<td>Length</td>
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<tr>
<td>Terminal Type</td>
</tr>
<tr>
<td>Back Up Nut</td>
</tr>
<tr>
<td>Face Nut</td>
</tr>
<tr>
<td>Hole Size</td>
</tr>
<tr>
<td>Rated</td>
</tr>
</tbody>
</table>

2 POSITION CONVENTIONAL - OFF - RUN
USE WITH SEPARATE STARTER BUTTON

MP39012 – BULK 100 PCS/CTN

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Material</td>
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<td>Back Up Nut</td>
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<td>Face Nut</td>
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<tr>
<td>Hole Size</td>
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</table>

MP39022 – BULK 100 PCS/CTN

<table>
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<tr>
<td>Back Up Nut</td>
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<tr>
<td>Face Nut</td>
</tr>
<tr>
<td>Hole Size</td>
</tr>
<tr>
<td>Rated</td>
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</table>

MP39822-1 – BULK 100 PCS/CTN

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>Material</td>
</tr>
<tr>
<td>Length</td>
</tr>
<tr>
<td>Terminal Type</td>
</tr>
<tr>
<td>Back Up Nut</td>
</tr>
<tr>
<td>Face Nut</td>
</tr>
<tr>
<td>Hole Size</td>
</tr>
<tr>
<td>Rated</td>
</tr>
</tbody>
</table>

WIRE & DIAGRAM COLOR CODES
- Red - Battery
- Black - Magneto Ground
- Yellow w/ Red Stripe - Solenoid
- Black w/ Yellow Stripe - Magneto
- Purple - Ignition
- Yellow w/ Black Stripe - Choke
- Purple w/ White Stripe - Accessory
4 POSITION MAGNETO - ACCESSORY - OFF - RUN - START

**MP39712-1 - BULK 100 PCS/CTN**
PUSH TO CHOKE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Material: Polyester</td>
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<tr>
<td>Length: Short: 5/8” maximum panel thickness</td>
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<tr>
<td>Terminal Type: 7 Color Code Wires</td>
</tr>
<tr>
<td>Back Up Nut: Brass</td>
</tr>
<tr>
<td>Face Nut: Knurled black plastic w/rubber cap</td>
</tr>
<tr>
<td>Hole Size: 7/8”</td>
</tr>
<tr>
<td>Rated</td>
</tr>
<tr>
<td>Ignition: 15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Solenoid: 30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Accessory: 15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Choke: 7 Amp @ 12v DC</td>
</tr>
</tbody>
</table>

**MP39722-1 - BULK 100 PCS/CTN**
PUSH TO CHOKE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material: Polyester</td>
</tr>
<tr>
<td>Length: Short: 5/8” maximum panel thickness</td>
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<tr>
<td>Terminal Type: 6 Color Code Wires</td>
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<tr>
<td>Back Up Nut: Brass</td>
</tr>
<tr>
<td>Face Nut: Knurled black plastic w/rubber cap</td>
</tr>
<tr>
<td>Hole Size: 7/8”</td>
</tr>
<tr>
<td>Rated</td>
</tr>
<tr>
<td>Ignition: 15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Solenoid: 30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Accessory: 15 Amp @ 12v DC</td>
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</tbody>
</table>

**MP41012 - BULK 100 PCS/CTN**
PUSH TO CHOKE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Material: Polyester</td>
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<tr>
<td>Length: Short: 5/8” maximum panel thickness</td>
</tr>
<tr>
<td>Terminal Type: 7 Screw Tab</td>
</tr>
<tr>
<td>Back Up Nut: Brass</td>
</tr>
<tr>
<td>Face Nut: Hex black plastic face nut</td>
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<tr>
<td>Hole Size: 7/8”</td>
</tr>
<tr>
<td>Rated</td>
</tr>
<tr>
<td>Ignition: 15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Solenoid: 30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Choke: 7 Amp @ 12v DC</td>
</tr>
<tr>
<td>Accessory: 15 Amp @ 12v DC</td>
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</table>

**MP41082 - BULK 100 PCS/CTN**
PUSH TO CHOKE

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
</tr>
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<tbody>
<tr>
<td>Material: Polyester</td>
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<tr>
<td>Length: Short: 5/8” maximum panel thickness</td>
</tr>
<tr>
<td>Terminal Type: 6 Screw Tab, 1 Boss Screw</td>
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<tr>
<td>Back Up Nut: Plastic</td>
</tr>
<tr>
<td>Face Nut: Hex black plastic face nut</td>
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<tr>
<td>Hole Size: 7/8”</td>
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<tr>
<td>Rated</td>
</tr>
<tr>
<td>Ignition: 15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Solenoid: 30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Choke: 7 Amp @ 12v DC</td>
</tr>
<tr>
<td>Accessory: 15 Amp @ 12v DC</td>
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**MP39732 - BULK 100 PCS/CTN**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Material: Polyester</td>
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<tr>
<td>Length: Short: 5/8” maximum panel thickness</td>
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<tr>
<td>Terminal Type: 7 Screw Tab</td>
</tr>
<tr>
<td>Back Up Nut: Brass</td>
</tr>
<tr>
<td>Face Nut: Hex black plastic face nut</td>
</tr>
<tr>
<td>Hole Size: 7/8”</td>
</tr>
<tr>
<td>Rated</td>
</tr>
<tr>
<td>Ignition: 15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Solenoid: 30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Choke: 7 Amp @ 12v DC</td>
</tr>
<tr>
<td>Accessory: 15 Amp @ 12v DC</td>
</tr>
</tbody>
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---

**WIRE & DIAGRAM COLOR CODES**

- Red - Battery
- Yellow w/ Red Stripe - Solenoid
- Purple - Ignition
- Purple w/ White Stripe - Accessory
3 POSITION MAGNETO - OFF - RUN - START

MP39762 - BULK 100 PCS/CTN
PUSH TO CHOKE

DESCRIPTION
Material Polyester
Length Short: 5/8" maximum panel thickness
Terminal Type 6 Screw Tab
Back Up Nut Brass
Face Nut Hex black plastic face nut
Hole Size 7/8"
Rated
Ignition 15 Amp @ 12v DC
Solenoid 30 Amp @ 12v DC
Choke 7 Amp @ 12v DC

MP41002 - BULK 100 PCS/CTN
PUSH TO CHOKE

DESCRIPTION
Material Polyester
Length Short: 5/8" maximum panel thickness
Terminal Type 5 Screw Tab, 1 Boss Screw
Back Up Nut Plastic
Face Nut Hex black plastic face nut
Hole Size 7/8"
Rated
Ignition 15 Amp @ 12v DC
Solenoid 30 Amp @ 12v DC
Choke 7 Amp @ 12v DC

MP39742-1 - BULK 100 PCS/CTN
PUSH TO CHOKE

DESCRIPTION
Material Polyester
Length Short: 5/8" maximum panel thickness
Terminal Type 6 Color Code Wires
Back Up Nut Not Required
Face Nut Knurled black plastic w/rubber cap
Hole Size 7/8"
Rated
Ignition 15 Amp @ 12v DC
Solenoid 30 Amp @ 12v DC
Accessory 15 Amp @ 12v DC

MP41072-2 – BULK 100 PCS/CTN
PUSH TO CHOKE / MERCURY
CONTROL BOX APPLICATIONS
(Colors on switch wires match factory color codes.)

DESCRIPTION
Material Polyester
Length Short: 5/8" maximum panel thickness
Terminal Type 6 Color Coded Wire Leads/Potted
Back Up Nut Not Required
Face Nut Hex black plastic face nut
Hole Size 7/8"
Rated
Ignition 15 Amp @ 12v DC
Solenoid 30 Amp @ 12v DC
Choke 7 Amp @ 12v DC

WIRE & DIAGRAM COLOR CODES
Red - Battery
Black - Magneto Ground
Yellow w/ Red Stripe - Solenoid
Black w/ Yellow Stripe - Magneto
Purple - Ignition
Yellow w/ Black Stripe - Choke
Purple w/ White Stripe - Accessory
3 POSITION MAGNETO - OFF - RUN - START (CONTINUED)

**MP39102 - BULK 100 PCS/CTN**

<table>
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<tbody>
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<td>Length: Long: 1 1/8&quot; maximum panel thickness</td>
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<tr>
<td>Terminal Type: 6 Screw Tab</td>
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<tr>
<td>Back Up Nut: Brass</td>
</tr>
<tr>
<td>Face Nut: Hex black plastic face nut</td>
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<tr>
<td>Hole Size: 7/8&quot;</td>
</tr>
<tr>
<td>Rated: 15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Solenoid: 30 Amp @ 12v DC</td>
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**MP39832 - BULK 100 PCS/CTN**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>Material: Polyester</td>
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<tr>
<td>Length: Long: 1 1/8&quot; maximum panel thickness</td>
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<tr>
<td>Terminal Type: 6 Screw Tab</td>
</tr>
<tr>
<td>Back Up Nut: Brass</td>
</tr>
<tr>
<td>Face Nut: Hex black plastic face nut</td>
</tr>
<tr>
<td>Hole Size: 7/8&quot;</td>
</tr>
<tr>
<td>Rated: 15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Solenoid: 30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Choke: 7 Amp @ 12v DC</td>
</tr>
<tr>
<td>*Terminal to power separately controlled choke circuit</td>
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**MP39092 - BULK 100 PCS/CTN**

<table>
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<tbody>
<tr>
<td>Material: Polyester</td>
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<tr>
<td>Length: Long: 1 1/8&quot; maximum panel thickness</td>
</tr>
<tr>
<td>Terminal Type: 6 Screw Tab</td>
</tr>
<tr>
<td>Back Up Nut: Anodized steel</td>
</tr>
<tr>
<td>Face Nut: Hex plastic face nut w/ snap on rubber cap</td>
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<tr>
<td>Hole Size: 7/8&quot;</td>
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<tr>
<td>Rated: 15 Amp @ 12v DC</td>
</tr>
<tr>
<td>Solenoid: 30 Amp @ 12v DC</td>
</tr>
<tr>
<td>Choke: 7 Amp @ 12v DC</td>
</tr>
</tbody>
</table>

**WIRE & DIAGRAM COLOR CODES**

- Red - Battery
- Yellow w/ Red Stripe - Solenoid
- Purple - Ignition
- Purple w/ White Stripe - Accessory
- Black - Magneto Ground
- Black w/ Yellow Stripe - Magneto
- Yellow w/ Black Stripe - Choke
EMERGENCY ENGINE CUT-OFF SWITCHES

- Kills ignition when lanyard is pulled
- Unique design keeps plunger down when lanyard is connected to seal out moisture
- Makes reconnection easier
- MP40972-1, MP55332, MP40977TB-1 are designed for conventional or magneto ignitions
- Panel thickness up to 1/4”

MP40972-1*
SWITCH AND LANYARD
Will provide a "normally open" or "normally closed" circuit.

MP28872-1*
SWITCH AND LANYARD
Replaces: OMC 585134
Closed position w/ lanyard off.

MP40977TB-1*
SWITCH AND LANYARD
Cut-off Switch w/ Coiled Lanyard - potted
Will provide a "normally open" or "normally closed" circuit.

MP55332*
SWITCH AND LANYARD
Cut-off Switch w/ Coiled Lanyard - no float no tag
Will provide a "normally open" or "normally closed" circuit.

* BULK - 100 PIECES PER CARTON
**ROTARY SWITCHES**

- Unique ergonomic design, styling and performance
- 20 AMP @ 12 Volts DC
- Durable cam design for long life
- UV stabilized thermoplastic housing
- Knob acts as umbrella - Silicone lip seal mates with stalk
- Separate light modules optional
- Replaces toggle or rocker switches with minimal panel alterations
- 1/2” hole size

RotoSwitch® provides illumination with different colors providing immediate visual information of switch position.

<table>
<thead>
<tr>
<th>BULK NUMBER</th>
<th>NUMBER OF BATTERY FEEDS</th>
<th>45° COUNTER CIRCLEwise</th>
<th>CIRCUITS “ON”</th>
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<tbody>
<tr>
<td>MP78712</td>
<td>1</td>
<td>---</td>
<td>OFF #</td>
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<tr>
<td>*MP59012</td>
<td>1</td>
<td>---</td>
<td>#</td>
</tr>
<tr>
<td>MP78722</td>
<td>1</td>
<td>---</td>
<td>OFF #1(M)</td>
</tr>
<tr>
<td>*MP59032</td>
<td>1</td>
<td>#1</td>
<td>#2</td>
</tr>
<tr>
<td>MP59042</td>
<td>1</td>
<td>#1(M)</td>
<td>OFF #2(M)</td>
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<tr>
<td>MP59062</td>
<td>1</td>
<td>#1</td>
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</tr>
<tr>
<td>MP78802</td>
<td>2</td>
<td>#1</td>
<td>OFF #2</td>
</tr>
<tr>
<td>*MP59102</td>
<td>1</td>
<td>#1</td>
<td>---</td>
</tr>
<tr>
<td>MP78822</td>
<td>1</td>
<td>#1</td>
<td>OFF #1&amp;2</td>
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<tr>
<td>*MP59122</td>
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<td>---</td>
<td>#1&amp;2</td>
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<tr>
<td>*MP59132</td>
<td>1</td>
<td>---</td>
<td>OFF #1#2</td>
</tr>
<tr>
<td>*MP59162</td>
<td>1</td>
<td>---</td>
<td>#1 #2 #1&amp;2</td>
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</tbody>
</table>

REPLACEMENT KNOBS

All include rubber umbrella seal. Original Ergotech design knob.

**Rotary Switches**

**BULK - 100 PIECES PER CARTON**

*MP79732 Tan knob with light tube. Use with illumination module.

*MP79742 Black knob with light tube. Use with illumination module.

*MP79762 Black knob with light tube. Use with illumination module.

*MP79862 Anti-rotation collar. Use when installing non-illuminated RotoSwitches in very thin dash panels. This adapter prevents the switch from “slipping” if excessive force is used to actuate the switch.

**ILLUMINATION MODULE**

Add flexibility and function to any installation of RotoSwitch® rotary switches. By using a variety of colored lenses, the status of each switch - “Off”, “On-1”, “On-2” – can instantly be determined.

C = Clear  G = Green
R = Red     B = Black

| BULK - 100 PIECES PER CARTON |
HEAVY DUTY 25 AMP TOGGLE SWITCHES

- Nickle Plated Brass Mounting Stem and Hardware
- Handle 11/16" (17.46mm) long
- Mounting Stem 15/32"-32 thread, 15/32" (11.81mm) long
- Fits panels up to 1/4" (6.35 mm) thick
- Rated: 25 Amp @ 12v DC

WEATHER RESISTANT TOGGLE SWITCHES

- Plasticized coating seals out moisture and dirt
- Nickel plated brass handle, mounting stem and hardware
- 10" L 16 gauge wire leads
- Handle 11/16" (17.46 mm) long
- Mounting stem 15/32"-32, 13/32" (10.31mm) long
- Fits panel up to 3/16" (4.76 mm) thick
- Includes MP39030 weather proof boot nut
- Rated: 15 amps @ 12v DC
- Plasticized coating seals out moisture and dirt
- Nickel plated brass handle, mounting stem and hardware
- 10" L 16 gauge wire leads
- Handle 11/16" (17.46 mm) long
WEATHER RESISTANT PUSH PULL SWITCHES

*MP39382
OFF-ON SPST
- Solid brass construction
- Gasket sealed case
- 3/8" mounting bushing
- 2 screw terminals
- 3/4" chrome plated brass knob
- For panels up to 1" thick
- Rated: 15 amp @ 12v DC

*MP39392
OFF-ON SPST
with chrome plated plastic knob
- Solid brass construction
- Vinyl coated body to resist moisture
- Two 18 gauge x 12" wire leads
- 3/8" mounting bushing
- For panels up to 1" thick
- Rated: 15 amp @ 12v DC

*MP39392B
OFF-ON SPST
with chrome plated brass knob
- Solid brass construction
- Vinyl coated body to resist moisture
- Two 18 gauge x 12" wire leads
- 3/8" mounting bushing
- For panels up to 1" thick
- Rated: 15 amp @ 12v DC

HEAVY DUTY MARINE PUSH PULL SWITCHES

*MP39512
OFF-ON SPST
- Pull for ON
- Solid brass construction
- 3/8" mounting bushing
- 2 screw terminals
- For panels up to 1" thick
- Cream plastic knob
- Rated: 15 amp @ 12v DC

*MP39522
OFF-ON SPST
- Pull for ON
- Solid brass construction
- 3/8" mounting bushing
- 2 screw terminals
- For panels up to 1" thick
- Chrome plated plastic knob
- Rated: 15 amp @ 12v DC

*MP39532
OFF-ON SPST
- Pull for ON
- Solid brass construction
- 3/8" mounting bushing
- 2 screw terminals
- For panels up to 1" thick
- Chrome plated solid brass knob
- Rated: 15 amp @ 12v DC

*MP39542
OFF-ON SPST
- Pull for ON
- Solid brass construction
- 3/8" mounting bushing
- 2 blade terminals
- For panels up to 1" thick
- Chrome finish plastic knob
- Rated: 15 amp @ 12v DC

*MP39552
OFF-ON SPST
- Pull for ON
- Solid brass construction
- 3/8" mounting bushing
- 2 screw terminals
- For panels up to 1" thick
- Chrome finish plastic knob
- Rated: 15 amp @ 12v DC

*MP39562
OFF-ON SPST
- Pull for ON
- Solid brass construction
- 3/8" mounting bushing
- 3 screw terminals
- For panels up to 1" thick
- Chrome finish plastic knob
- Rated: 15 amp @ 12v DC

*MP39572
OFF-ON(1)-ON(1&2) SPDT
- First pull energizes #1
- Second pull energizes both circuits
- Solid brass construction
- 3/8" mounting bushing
- 3 screw terminals
- For panels up to 1" thick
- Chrome finish plastic knob
- Rated: 15 amp @ 12v DC

*MP395612
OFF-ON(1)-ON(2&3) SPDT
- First pull energizes #1
- Second pull energizes two separate circuits
- For anchor/running lights or similar function
- Solid brass construction
- 3/8" mounting bushing
- 4 screw terminals
- For panels up to 1" thick
- Chrome finish plastic knob
- Rated: 15 amp @ 12v DC

* BULK - 100 PIECES PER CARTON
HEAVY DUTY MARINE PUSH PULL SWITCHES (CONTINUED)

*MP39602
OFF-ON (1 & 2) SPST
• Pull for ON - turns on two separate circuits
• Solid brass construction
• 3/8” mounting bushing
• 3 screw terminals
• For panels up to 1” thick
• Chrome plated solid brass knob
• Rated: 15 amp @ 12v DC

*MP39582
OFF-ON(1)-ON(1&2) SPDT
• First pull energizes #1
• Second pull energizes both circuits
• Solid brass construction
• 3/8” mounting bushing
• 3 screw terminals
• For panels up to 1” thick
• Chrome plated solid brass knob
• Rated: 15 amp @ 12v DC

*MP39592
OFF-ON(1)-ON(1&2) SPDT
• First pull energizes #1
• Second pull energizes both circuits
• Solid brass construction
• 3/8” mounting bushing
• 3 blade terminals
• For panels up to 1” thick
• Chrome finish plastic knob
• Rated: 15 amp @ 12v DC

*MP39402
ON-ON SPST
• Used to control same circuit from two locations
• Solid brass construction
• 3/8” mounting bushing
• 3 screw terminals
• For panels up to 1” thick
• Chrome plated solid brass knob
• Rated: 15 amp @ 12v DC

*MP39622
OFF-ON(1)-ON(2&3) SPDT
• First pull energizes #1
• Second pull energizes two separate circuits
• For anchor/running lights or similar function
• Solid brass construction
• 3/8” mounting bushing
• 4 screw terminals
• For panels up to 1” thick
• Chrome plated solid brass knob
• Rated: 15 amp @ 12v DC

*MP39642
OFF-ON(1)-ON(2) SPDT
• First pull energizes #1
• Second pull energizes circuit 2
• Solid brass construction
• 3/8” mounting bushing
• 3 screw terminals
• For panels up to 1” thick
• Chrome plated solid brass knob
• Rated: 15 amp @ 12v DC

* BULK - 100 PIECES PER CARTON
BRASS PUSH BUTTON SWITCHES

- Solid brass construction
- For starter, horn or other functions
- 1 1/4"L x 5/8" mounting stem
- 2 screw terminals (except MP39340)
- Rated: 20 amp @ 12v DC

PUSH BUTTON SWITCHES

- Contoured plastic button
- Chrome plated brass mounting stem
- 1/2" Mounting hole
- 2 brass blade terminals
- Rated 15 amp @ 12v DC
MAXI™ FUSE BLOCK

*FS81082
- Black Reinforced Polycarbonate
- For Maxi™ fuses 30-80 A
- Snap-on cover insulates conductive parts - meets ABYC & USCG requirements
- Accepts 18-4 AWG wire from sides or bottom
- Maximum voltage - 32v DC
- Meets SAE J1171

GROUND BUS BAR FOR ATO/ATC FUSE BLOCKS

*FS40732
- Replacement bus bar for Sierra ATO/ATC fuse blocks
- 14 - 1/4" tin plated copper tab terminals

ATO/ATC STYLE FUSE BLOCKS

- For ATO/ATC fuses
- Interlocking modules snap together
- 1/4" tin plated copper tab terminals
- Flame resistant reinforced polyester base
- Rated 30 Amps per circuit, 160 Amp total for block

WITH GROUND BUS BAR

<table>
<thead>
<tr>
<th>PART #</th>
<th># OF GANGS</th>
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<tbody>
<tr>
<td>*FS40422</td>
<td>6</td>
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<tr>
<td>*FS4032</td>
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<tr>
<td>*FS40442</td>
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<tr>
<td>*FS40452</td>
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<tr>
<td>*FS40742</td>
<td>10</td>
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<tr>
<td>*FS40752</td>
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WITHOUT GROUND BUS BAR

<table>
<thead>
<tr>
<th>PART #</th>
<th># OF GANGS</th>
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</thead>
<tbody>
<tr>
<td>*FS40412</td>
<td>14</td>
</tr>
<tr>
<td>*FS56242</td>
<td>4</td>
</tr>
<tr>
<td>*FS56232</td>
<td>6</td>
</tr>
<tr>
<td>*FS56252</td>
<td>10</td>
</tr>
</tbody>
</table>

HIGH AMPERAGE CIRCUIT BREAKERS

* Perfect for rigging trolling motors, windless, and other high amp electrical equipment

AUTO RESET

* INCLUDES STUD MOUNTING PLATE

CB42242 40 Amp • 12V
CB42252-1 50 Amp • 12V

MANUAL RESET

* INCLUDES STUD MOUNTING PLATE

CB43242 40 Amp • 12V
CB45252 50 Amp • 24V

CB60002-1
- Ignition protected
- Waterproof
- Can be used as switch and circuit breaker
- Replaces Minnkota MKR-19
- Rated - 60 A
- Maximum voltage 42v DC
- Stainless steel hardware

CB600012
- Ignition protected
- Waterproof
- Can be used as switch and circuit breaker
- Rated - 50 A
- Maximum voltage 24v DC
- Stainless steel hardware

* BULK - 100 PIECES PER CARTON
CORROSION RESISTANT COMMON BUS BARS

- Use as common hot feed or common ground block
- Tin plated copper bus
- Stainless steel studs & screws
- Large diameter nuts provide large electrical contact area
- Stainless steel screws with lock washers

150 AMP COMMON BUS

*FS46102
• 5 - 8-32 Screw Terminals
• 2 - 10-24 Stud Terminals
Overall size - 4.13"L x .75"W x 1.44"H

*FS46202
• 10 - 8-32 Screw Terminals
• 2 - 1/4"-20 Stud Terminals
Overall size - 6"L x 1.25"W x 1.44"H

*FS46402
• 20 - 8-32 Screw Terminals
• 2 - 1/4"-20 Stud Terminals
Overall size - 9 1/4"L x 1.25"W x 1.44"H

*FS46152
• 4 - 10-24 Stud Terminals
Overall size - 4.13"L x .75"W x 1.44"H

*FS46252
• 4 - 1/4"-20 Stud Terminals
Overall size - 6"L x 1.25"W x 1.44"H

*FS46452
• 6 - 1/4"-20 Stud Terminals
Overall size - 9 1/4"L x 1.25"W x 1.44"H

250 AMP COMMON BUS

*FS46302
• 12 - 8-32 Screw Terminals
• 2 - 1/4"-20 Stud Terminals
Overall size - 7.88"L x 1.5"W x 1.75"H

*FS46352
• 4 - 1/4"-20 Stud Terminals
Overall size - 7.88"L x 1.5"W x 1.75"H

600 AMP COMMON BUS

*FS46552
• 4 x 3/8-16 Stud Terminals
Overall size - 7.00"L x 2"W x 2"H

*FS46562
• 8 x 3/8-16 Stud Terminals
Overall size - 11.375"L x 2"W x 2"H

* BULK - 100 PIECES PER CARTON
TROLLING MOTOR PLUGS

*WH10602-1
V-GROOVE FEMALE MOTOR SIDE TROLLING MOTOR SOCKET
12 Volt
6" - 8 gauge w/ butt connectors
Use with WH10612-1

*WH10612-1
V-GROOVE MALE BOAT SIDE TROLLING MOTOR PLUG
12 Volt
6" - 8 gauge w/ butt connectors
Use with WH10602-1

WH10522
MALE BOAT SIDE TROLLING MOTOR PLUG
12 Volt
6" - 8 gauge w/ butt connectors
Use with WH10532

WH10532
FEMALE MOTOR SIDE TROLLING MOTOR SOCKET
12 Volt
6" - 8 gauge w/ butt connectors
Use with WH10522

WH10542
MALE BOAT SIDE TROLLING MOTOR PLUG
24 Volt
6" - 8 gauge w/ butt connectors
Use with WH10552

WH10552
FEMALE MOTOR SIDE TROLLING MOTOR SOCKET
24 Volt
6" - 8 gauge w/ butt connectors
Use with WH10542

WH10472
FEMALE BOAT SIDE TROLLING MOTOR SOCKET
12 Volt
6" - 10 gauge w/ butt connectors
Use with WH10482

WH10482
MALE MOTOR SIDE TROLLING MOTOR PLUG
12 Volt
6" - 10 gauge w/ butt connectors
Use With WH10472

WH10492
FEMALE BOAT SIDE TROLLING MOTOR SOCKET
24 Volt
6" - 10 gauge w/ butt connectors
Use with WH10502

WH10502
MALE MOTOR SIDE TROLLING MOTOR PLUG
24 Volt
6" - 10 gauge w/ butt connectors
Use with WH10492

WH10642
FEMALE MOTOR SIDE CONNECTOR
24 Volt • 60 AMP
Use with WH10652

WH10652
MALE BOAT SIDE PLUG
24 Volt • 60 AMP
Use with WH10642

* BULK - 100 PIECES PER CARTON
BATTERY ACCESSORIES

BATTERY CABLES
Gauge cable with soldered lug terminals on each end to accept a 3/8” stud.

<table>
<thead>
<tr>
<th>PART #</th>
<th>SIZE</th>
<th>COLOR</th>
<th>GAUGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-188852</td>
<td>2’</td>
<td>RED</td>
<td>4</td>
</tr>
<tr>
<td>N-188853</td>
<td>2’</td>
<td>BLACK</td>
<td>4</td>
</tr>
<tr>
<td>N-188854</td>
<td>4’</td>
<td>RED</td>
<td>2</td>
</tr>
<tr>
<td>N-188855</td>
<td>4’</td>
<td>BLACK</td>
<td>2</td>
</tr>
<tr>
<td>N-188856</td>
<td>6’</td>
<td>RED</td>
<td>2</td>
</tr>
<tr>
<td>N-188857</td>
<td>6’</td>
<td>BLACK</td>
<td>2</td>
</tr>
<tr>
<td>N-188858</td>
<td>8’</td>
<td>RED</td>
<td>1</td>
</tr>
<tr>
<td>N-188859</td>
<td>8’</td>
<td>BLACK</td>
<td>1</td>
</tr>
</tbody>
</table>

N-186850
BATTERY DISCONNECT RELAY
Fits: Universal

BATTERY ISOLATORS

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>DIMENSIONS</th>
<th>BATTERIES</th>
<th>ALTERNATORS</th>
<th>TERMINALS</th>
<th>MAX. OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-6851</td>
<td>6 ½” w x 4 ½” d x 3 ½” h</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>130 Amp</td>
</tr>
<tr>
<td>18-6852</td>
<td>8” w x 4 ½” d x 3 ½” h</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>165 Amp</td>
</tr>
<tr>
<td>18-6853</td>
<td>11” w x 4 ½” d x 3 ½” h</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>200 Amp</td>
</tr>
<tr>
<td>18-6854</td>
<td>8” w x 4 ½” d x 3 ½” h</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>160 Amp</td>
</tr>
<tr>
<td>18-6855*</td>
<td>3 ¼” w x 4 ½” d x 3 ½” h</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>75 Amp</td>
</tr>
<tr>
<td>18-6856</td>
<td>15” w x 4 ½” d x 3 ½” h</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>270 Amp</td>
</tr>
</tbody>
</table>

*Will not work with Delco “CS” style alternators • All battery isolators have Universal fit.
LOCKS & LATCHES

*MP49412
- Turn to open mechanism – no finger pull
- Can be locked or left in latch only position
- Totally corrosion resistant
- Black glass reinforced polyester
- Supplied with 2 keys
- 1” hole size

*MP49432
- Turn to open mechanism - no finger pull
- Non-Locking version
- Totally corrosion resistant
- Black glass reinforced polyester
- 1” hole size

*MP50562
- Black sculpted knob
- Turn to open mechanism – no finger pull
- Can be locked or left in latch only position
- Totally corrosion resistant
- Black glass reinforced polyester
- Supplied with 2 keys
- 1” hole size

* Bulk - 100 pieces per carton
PERFORMANCE MOLDED CUSTOM KEYS

CUSTOMIZE YOUR BOAT!

• Available on most ignition switches from Sierra.
• Available blank. Use your drip molder or have us install the logo at the factory.

Your single source for performance molded custom keys!

www.seastarsolutions.com
## PRODUCT APPLICATION GUIDE

### PRODUCT APPLICATION GUIDE KEY

**EX** — Designed to give excellent service  
**G** — Designed to give good service in normal applications  
**C** — Product can give good service with proper installation, may not be suitable in all applications.  
**X** — Not recommended  
**NA** — Not available in size range

### SERIES NO.  |  NAME  |  PG. NO.  |  SIZE RANGE  |  APPLICATION
--- | --- | --- | --- | ---
### BILGE/LIVEWELL

**Series 120**  
Shields Bilgeflex  
26  
5/8" - 1 1/2"  
G  
X  
C  
X  
X  
X  
X  
1
**Series 123**  
Shields Bilgevac  
26  
3/4" - 1 1/2"  
EX  
G  
EX  
X  
C  
X  
1
**Series 140**  
Shields Vac Std.  
27  
1 1/4" - 1 1/2"  
EX  
EX  
EX  
G  
G  
C  
1
**Series 141**  
Shields Multiflex  
28  
3/4" - 3"  
EX  
G  
EX  
X  
G  
X  
1
**Series 142**  
Shields Vac Cuffs  
27  
1 1/2"  
EX  
EX  
EX  
EX  
EX  
EX  
2
**Series 146**  
Shields Vac Extra Heavy Duty/Commercial Grade  
28  
3/4" - 3"  
EX  
EX  
EX  
EX  
EX  
EX  
2
**Series 147**  
Shields Vac H.D. Cuffs  
27  
1 1/2"  
EX  
EX  
EX  
EX  
EX  
EX  
2
**Series 148**  
Shields Vac Extra Heavy Duty  
29  
3/4" - 1 1/2"  
EX  
EX  
EX  
EX  
EX  
EX  
2
**Series 149**  
Shields Livewell Hose  
29  
3/4" - 1 1/2"  
EX  
EX  
EX  
EX  
EX  
EX  
1

### ENGINE

**Series 130**  
Shields #1300 Heater Hose  
30  
7/8" - 3/4"  
X  
X  
G  
X  
X  
X  
3
**Series 135**  
Shields #1350 H.D. Water Hose  
30  
7/8" - 1"  
X  
C  
G  
X  
G  
3
**Series 160**  
Shields #1600 Water Hose  
30  
3/4" - 1 1/4"  
X  
G  
EX  
X  
G  
2
**Series 200**  
Shields Marine Exhaust  
31  
7/8" - 14"  
X  
C  
EX  
X  
G  
3
**Series 202**  
Shields Nautiflex Silicone Exhaust Hose  
32  
1" - 14"  
X  
X  
EX  
X  
C  
3
**Series 250**  
Shieldsflex II  
33  
7/8" - 9"  
EX  
EX  
EX  
EX  
EX  
2
**Series 252**  
Shieldscaust - C  
34  
3/4" - 8"  
EX  
EX  
EX  
EX  
EX  
1
**Series 262**  
Shields Corrugated Nautiflex Silicone Exhaust Hose  
35  
7/8" - 10"  
EX  
EX  
EX  
EX  
EX  
1
**Series 321**  
Shields Comflex All in One Hose  
36  
7/8" - 2"  
EX  
EX  
EX  
EX  
EX  
2
<table>
<thead>
<tr>
<th>SERIES NO.</th>
<th>NAME</th>
<th>PG. NO.</th>
<th>SIZE RANGE</th>
<th>PRESSURIZED</th>
<th>APPLICATION</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>FRESH WATER SYSTEM/POTABLE</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Series 141</td>
<td>Shields Multiflex</td>
<td>37</td>
<td>1/4&quot; - 3&quot;</td>
<td>C</td>
<td>X</td>
</tr>
<tr>
<td>Series 148</td>
<td>Shields Vac Extra Heavy Duty</td>
<td>37</td>
<td>1/4&quot; - 1 1/2&quot;</td>
<td>N/A</td>
<td>X</td>
</tr>
<tr>
<td>Series 150</td>
<td>Shields PVC Hose</td>
<td>38</td>
<td>3/4&quot; - 1 1/2”</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Series 162</td>
<td>Shields All Clear Reinforced PVC — Red Tracer</td>
<td>39</td>
<td>3/8&quot; - 1 1/2&quot;</td>
<td>EX</td>
<td>EX</td>
</tr>
<tr>
<td>Series 163</td>
<td>Shields Braided Wash Down Hose</td>
<td>39</td>
<td>3/16&quot;</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Series 164</td>
<td>Shields Clear White Reinforced PVC — Blue Tracer</td>
<td>40</td>
<td>1/4&quot; - 3/4&quot;</td>
<td>EX</td>
<td>G</td>
</tr>
<tr>
<td>Series 168</td>
<td>Shields Heavy Duty Reinforced PVC Tubing</td>
<td>40</td>
<td>1/4&quot; - 1 1/2&quot;</td>
<td>EX</td>
<td>EX</td>
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<tr>
<td></td>
<td><strong>FUEL SYSTEM</strong></td>
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<tr>
<td>Series 309</td>
<td>Shields Oil Tank Fill Hose</td>
<td>41</td>
<td>1 1/2&quot;</td>
<td>EX</td>
<td>X</td>
</tr>
<tr>
<td>Series 315</td>
<td>Shields 315 - Silverado 2000</td>
<td>41</td>
<td>3/8&quot; - 3/4&quot;</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Series 321</td>
<td>Shields Comflex All in One Hose</td>
<td>46</td>
<td>3/4&quot; - 2&quot;</td>
<td>EX</td>
<td>EX</td>
</tr>
<tr>
<td>Series 337</td>
<td>Shields Silverado 4000</td>
<td>42</td>
<td>1&quot; - 3/4&quot;</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Series 350</td>
<td>Shields FIRE-ACOL</td>
<td>43</td>
<td>1 1/4&quot; - 2 1/2&quot;</td>
<td>EX</td>
<td>EX</td>
</tr>
<tr>
<td>Series 351</td>
<td>Shields FIRE-ACOL-C</td>
<td>43</td>
<td>1 1/4&quot; - 2&quot;</td>
<td>EX</td>
<td>EX</td>
</tr>
<tr>
<td>Series 355</td>
<td>Shields Fuel Fill</td>
<td>44</td>
<td>3/8&quot; - 1&quot;</td>
<td>EX</td>
<td>EX</td>
</tr>
<tr>
<td>Series 365</td>
<td>Shields FIRE-ACOL-15</td>
<td>44</td>
<td>3/8&quot; - 1 1/2&quot;</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Series 368</td>
<td>Shields Low Permeation Marine Fuel Hose</td>
<td>45</td>
<td>1/2&quot; - 1 1/2&quot;</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Series 369</td>
<td>Shields FIRE-ACOL Fuel Vent Hose</td>
<td>45</td>
<td>1/8&quot;</td>
<td>N/A</td>
<td>N/A</td>
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<td></td>
<td><strong>SANITATION SYSTEM</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Series 101</td>
<td>Shields Sanitation Hose</td>
<td>47</td>
<td>1&quot; &amp; 1 1/2&quot;</td>
<td>EX</td>
<td>EX</td>
</tr>
<tr>
<td>Series 105</td>
<td>Shields Poly X Sanitation Hose</td>
<td>47</td>
<td>1&quot; &amp; 1 1/2&quot;</td>
<td>EX</td>
<td>EX</td>
</tr>
<tr>
<td>Fittings</td>
<td>For Series: 101, 105, 144, 148</td>
<td>47</td>
<td>3/4&quot; - 1&quot;</td>
<td>EX</td>
<td>EX</td>
</tr>
<tr>
<td>Series 144</td>
<td>Shields Super PVC Sanitation</td>
<td>48</td>
<td>1&quot; &amp; 1 1/2&quot;</td>
<td>EX</td>
<td>EX</td>
</tr>
<tr>
<td>Series 146</td>
<td>Shields Vac Extra Heavy Duty/Industrial</td>
<td>48</td>
<td>3/8&quot; - 3&quot;</td>
<td>G</td>
<td>EX</td>
</tr>
<tr>
<td>Series 148</td>
<td>Shields Vac Extra Heavy Duty</td>
<td>49</td>
<td>3/8&quot; - 1 1/2&quot;</td>
<td>G/EX</td>
<td>EX</td>
</tr>
<tr>
<td>Series 149</td>
<td>Shields Livewell</td>
<td>49</td>
<td>3/8&quot; - 1 1/2&quot;</td>
<td>G</td>
<td>G</td>
</tr>
<tr>
<td></td>
<td><strong>VENTILATION/AC DUCT</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Series 400</td>
<td>Shields Vinyvent</td>
<td>50</td>
<td>3&quot; - 4&quot;</td>
<td>EX</td>
<td>X</td>
</tr>
<tr>
<td>Series 402</td>
<td>Shields Vinyvent</td>
<td>50</td>
<td>3&quot; - 4&quot;</td>
<td>EX</td>
<td>X</td>
</tr>
<tr>
<td>Series 420</td>
<td>Shields Extra Heavy Duty Vinyvent</td>
<td>50</td>
<td>3&quot; - 4&quot;</td>
<td>EX</td>
<td>X</td>
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<tr>
<td>Series 450</td>
<td>Shields Fibervent</td>
<td>51</td>
<td>3&quot; - 6&quot;</td>
<td>EX</td>
<td>G</td>
</tr>
<tr>
<td>Series 460</td>
<td>Shields AC Ducting Hose</td>
<td>51</td>
<td>3&quot; - 7&quot;</td>
<td>EX</td>
<td>EX</td>
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</tbody>
</table>
### WET EXHAUST SYSTEM

<table>
<thead>
<tr>
<th>SERIES NO.</th>
<th>NAME</th>
<th>PG. NO.</th>
<th>SIZE RANGE</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 200</td>
<td>Shields Marine Exhaust</td>
<td>52</td>
<td>1/2&quot; - 14&quot;</td>
<td>EX</td>
</tr>
<tr>
<td>Series 202</td>
<td>Nautiflex Silicone Exhaust</td>
<td>53</td>
<td>1&quot; - 14&quot;</td>
<td>EX</td>
</tr>
<tr>
<td>Series 250</td>
<td>Shieldsflex II</td>
<td>54</td>
<td>1/2&quot; - 8&quot;</td>
<td>EX</td>
</tr>
<tr>
<td>Series 252</td>
<td>Shieldsaust - C</td>
<td>55</td>
<td>1/4&quot; - 8&quot;</td>
<td>EX</td>
</tr>
<tr>
<td>Series 262</td>
<td>Corrugated Nautiflex Silicone Exhaust Hose</td>
<td>56</td>
<td>3/8&quot; - 16&quot;</td>
<td>EX</td>
</tr>
<tr>
<td>Series 321</td>
<td>Shields Comflex All in One Hose</td>
<td>57</td>
<td>5/8&quot; - 2&quot;</td>
<td>EX</td>
</tr>
<tr>
<td>Various</td>
<td>Hump Hose &amp; Elbows</td>
<td>58-61</td>
<td>2&quot; - 10&quot;</td>
<td></td>
</tr>
</tbody>
</table>

### MISCELLANEOUS

<table>
<thead>
<tr>
<th>SERIES NO.</th>
<th>NAME</th>
<th>PG. NO.</th>
<th>SIZE RANGE</th>
<th>APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exhaust Protector Valves</td>
<td>62</td>
<td>4&quot; - 6&quot;</td>
<td>Prevents water from entering exhaust system</td>
</tr>
<tr>
<td></td>
<td>Exhaust Hose Clamps - T-Bolt Band Clamps</td>
<td>62</td>
<td>1&quot; - 14&quot;</td>
<td>Designed to fit Shields Series: 200, 201, 210, 250, 252</td>
</tr>
<tr>
<td></td>
<td>Ferrule Vise / Dies</td>
<td>63</td>
<td>1/4&quot; - 1/2&quot;</td>
<td>For making fuel line assemblies without clamps</td>
</tr>
<tr>
<td>Series 128</td>
<td>Flame Retardant Split Wire Conduit</td>
<td>64</td>
<td>1/4&quot; - 2&quot;</td>
<td>Provides chafing protection for wiring systems</td>
</tr>
<tr>
<td>Series 126</td>
<td>Shields Sternflex</td>
<td>64</td>
<td>2&quot;</td>
<td>Provides protection for outboard rigging cables &amp; hose</td>
</tr>
<tr>
<td>Series 151</td>
<td>Neoprene Sheet rubber</td>
<td>65</td>
<td>1/8&quot; - 1/4&quot;</td>
<td>Used under fuel tanks to comply with USCG requirements</td>
</tr>
<tr>
<td>Series 151</td>
<td>Speedometer Pitot Tubing</td>
<td>65</td>
<td>1/8&quot; - 4mm</td>
<td>Connection from pilot to speedometer</td>
</tr>
</tbody>
</table>
**SHIELDS BILGEFLEX**

Shields Bilgefex Hose is a single layer corrugated polyethylene hose. It is resistant to mild chemicals and salt water and there is a clamping cuff every foot. It is available in black or white (add B or W to suffix to specify color). This hose is primarily used for bilge pump discharge.

**Do not attach to thru hull fitting below the water line.**

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>RADIUS</th>
<th>MM</th>
<th>RATING</th>
<th>&quot;C&quot;</th>
<th>CODE #</th>
<th>BULK PACK</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>15.9</td>
<td>1/2&quot;</td>
<td>12.7</td>
<td>20</td>
<td>5</td>
<td>16-120-0580</td>
<td>600'</td>
<td>182.9</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>19.1</td>
<td>3/4&quot;</td>
<td>19.1</td>
<td>20</td>
<td>6</td>
<td>16-120-0340</td>
<td>500'</td>
<td>152.4</td>
</tr>
<tr>
<td>1 1/4&quot;</td>
<td>28.6</td>
<td>1&quot;</td>
<td>25.4</td>
<td>20</td>
<td>7</td>
<td>16-120-1180</td>
<td>300'</td>
<td>91.4</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>31.8</td>
<td>1 1/2&quot;</td>
<td>38.1</td>
<td>20</td>
<td>10</td>
<td>16-120-1140</td>
<td>200'</td>
<td>61.0</td>
</tr>
<tr>
<td>1 3/4&quot;</td>
<td>38.1</td>
<td>2&quot;</td>
<td>50.8</td>
<td>20</td>
<td>13</td>
<td>16-120-1120</td>
<td>150'</td>
<td>45.7</td>
</tr>
</tbody>
</table>

* Add B or W suffix to specify black or white

**SHIELDS BILGEVAC**

Shields Bilgevac Hose is a black PVC hose with a flexible vinyl helix. It is very flexible, abrasion resistant and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump discharge and drains (sinks, shower, scupper, and livewell).

**Do not attach to thru hull fitting below the water line.**

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>BEND RADIUS</th>
<th>MM</th>
<th>WT. &quot;C&quot;</th>
<th>BULK PACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>19.1</td>
<td>3/8&quot;</td>
<td>50.8</td>
<td>8</td>
<td>16-123-0340</td>
</tr>
<tr>
<td>1 1/4&quot;</td>
<td>28.6</td>
<td>1&quot;</td>
<td>76.2</td>
<td>16</td>
<td>16-123-1180</td>
</tr>
</tbody>
</table>
**SHIELDS VAC STANDARD**

Shields Vac Standard Hose is PVC supported by vinyl covered steel wire and is very flexible. It is Nylon reinforced (1 ¼” and 1 ½” only) and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, diaphragm style hand operated bilge pump intake and discharge and drains (sinks, shower, and scupper). This hose uses 142 left hand thread cuffs.

*Do not attach to thru hull fitting below the water line.*

<table>
<thead>
<tr>
<th>I.D.</th>
<th>Bend Radius</th>
<th>Vac Rating</th>
<th>Wt. “C”</th>
<th>Bulk Pack Code #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ¼”</td>
<td>31.8</td>
<td>19.1</td>
<td>28</td>
<td>16-140-1140 ➀</td>
</tr>
<tr>
<td>1 ½”</td>
<td>38.1</td>
<td>19.1</td>
<td>23</td>
<td>16-140-1120 ➀</td>
</tr>
</tbody>
</table>

➀ 2 x 50’ per box

---

**SHIELDS VAC CUFFS**

Shields Vac Cuffs provide added clamping protection for Shields Vac Hose. For watertight seal apply with sealing compound. Use with Series 140 & 141. Glue using PVC cement.

<table>
<thead>
<tr>
<th>Size</th>
<th>Code No.</th>
<th>For #</th>
<th>Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ¼”</td>
<td>16-142-1140</td>
<td>Series 140</td>
<td>Left Hand</td>
</tr>
<tr>
<td>1 ½”</td>
<td>16-142-1120</td>
<td>Series 140</td>
<td>Left Hand</td>
</tr>
<tr>
<td>1 ⅛”</td>
<td>16-147-1120</td>
<td>Series 141</td>
<td>Right Hand</td>
</tr>
</tbody>
</table>
**SHIELDS VAC EXTRA HEAVY DUTY - INDUSTRIAL GRADE**

Shields Vac Extra Heavy Duty/Commercial Grade Hose has a smooth cover and clear FDA formula PVC with a white vinyl helix. It is rated for full vacuum and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, potable water tank fill, drains (sinks, shower, and scupper), livewell intake and drain, and sanitation (intake, vent and pump out). This hose is utilized for below the waterline connections.

Do not use ethylene glycol based antifreeze in hose.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>BEND RADIUS</th>
<th>MM</th>
<th>VAC RATING</th>
<th>WT. °C</th>
<th>BULK PACK 100' (30.5M) COIL CODE #</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8”</td>
<td>15.9</td>
<td>3</td>
<td>76.2</td>
<td>28</td>
<td>15</td>
<td>16-146-0580</td>
</tr>
<tr>
<td>3/4”</td>
<td>19.1</td>
<td>3</td>
<td>76.2</td>
<td>28</td>
<td>16</td>
<td>16-146-0340</td>
</tr>
<tr>
<td>1”</td>
<td>25.4</td>
<td>3</td>
<td>76.2</td>
<td>28</td>
<td>27</td>
<td>16-146-1000</td>
</tr>
<tr>
<td>1 1/8”</td>
<td>28.6</td>
<td>4</td>
<td>101.6</td>
<td>28</td>
<td>25</td>
<td>16-146-1180</td>
</tr>
<tr>
<td>1 1/4”</td>
<td>31.8</td>
<td>3</td>
<td>76.2</td>
<td>28</td>
<td>30</td>
<td>16-146-1140</td>
</tr>
<tr>
<td>1 1/2”</td>
<td>38.1</td>
<td>4</td>
<td>101.6</td>
<td>28</td>
<td>40</td>
<td>16-146-1120</td>
</tr>
<tr>
<td>2”</td>
<td>50.8</td>
<td>5</td>
<td>127.0</td>
<td>28</td>
<td>57</td>
<td>16-146-2000</td>
</tr>
<tr>
<td>2 1/2”</td>
<td>63.5</td>
<td>7</td>
<td>177.8</td>
<td>28</td>
<td>74</td>
<td>16-146-2120</td>
</tr>
<tr>
<td>3”</td>
<td>76.2</td>
<td>9</td>
<td>228.6</td>
<td>28</td>
<td>94</td>
<td>16-146-3000</td>
</tr>
</tbody>
</table>
Shields Vac Extra Heavy Duty/FDA Hose has a smooth white FDA grade PVC with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals, permeation, and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, potable water tank fill, and sanitation (toilet holding tank, intake, self draining lines vent and pump out). This hose is resistant to odor permeation.

**Do not use ethylene glycol based antifreeze in hose. Do not use in pressurized water systems.**

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>Bend Radius</th>
<th>MM</th>
<th>VAC Rating</th>
<th>WT. °C</th>
<th>BULK PACK 100’ (30.5M) COIL CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot;</td>
<td>15.9</td>
<td>3</td>
<td>76.2</td>
<td>28</td>
<td>15</td>
<td>16-148-0580W</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>19.1</td>
<td>3</td>
<td>76.2</td>
<td>28</td>
<td>20</td>
<td>16-148-0640W</td>
</tr>
<tr>
<td>1&quot;</td>
<td>25.4</td>
<td>3</td>
<td>76.2</td>
<td>28</td>
<td>27</td>
<td>16-148-1000W</td>
</tr>
<tr>
<td>1 1/8&quot;</td>
<td>28.6</td>
<td>4</td>
<td>101.6</td>
<td>28</td>
<td>29</td>
<td>16-148-1180W</td>
</tr>
<tr>
<td>1 1/4&quot;</td>
<td>31.8</td>
<td>4</td>
<td>101.6</td>
<td>28</td>
<td>31</td>
<td>16-148-1140W</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>38.1</td>
<td>5</td>
<td>127.0</td>
<td>28</td>
<td>40</td>
<td>16-148-1120W</td>
</tr>
</tbody>
</table>

**WARNING:** Lines containing raw sewage should be plumbed to be self-draining.

Shields Livewell Hose has a black smooth cover with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, and sanitation (intake and vent). This hose is utilized for below the waterline connections.

**Do not use ethylene glycol based antifreeze in hose.**

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>Bend Radius</th>
<th>MM</th>
<th>VAC Rating</th>
<th>WT. °C</th>
<th>BULK PACK 100’ (30.5M) COIL CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot;</td>
<td>15.9</td>
<td>3</td>
<td>76.2</td>
<td>28</td>
<td>15</td>
<td>16-149-0580</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>19.1</td>
<td>3</td>
<td>76.2</td>
<td>28</td>
<td>16</td>
<td>16-149-0340</td>
</tr>
<tr>
<td>1&quot;</td>
<td>25.4</td>
<td>3</td>
<td>76.2</td>
<td>28</td>
<td>24</td>
<td>16-149-1000</td>
</tr>
<tr>
<td>1 1/8&quot;</td>
<td>28.6</td>
<td>4</td>
<td>101.6</td>
<td>28</td>
<td>25</td>
<td>16-149-1180</td>
</tr>
<tr>
<td>1 1/4&quot;</td>
<td>31.8</td>
<td>4</td>
<td>101.6</td>
<td>28</td>
<td>28</td>
<td>16-149-1140</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>38.1</td>
<td>5</td>
<td>127.0</td>
<td>28</td>
<td>39</td>
<td>16-149-1120</td>
</tr>
</tbody>
</table>
SHIELDS 1300/1350 WATER/HEATER HOSE

Shields 1300/1350 Water / Heater Hose is fabric reinforced and has an EPDM tube and cover. This hose is primarily used for engine heater hose, heat exchanger, A/C circulation, and drain lines (sink, icebox, shower and livewell). It is resistant to mild chemicals, heat, cold, ozone and saltwater. The temperature ranges from -40°F to 212°F.

<table>
<thead>
<tr>
<th>I.D. MM</th>
<th>O.D. MM</th>
<th>WORKING PRESSURE PSI</th>
<th>WT. °C</th>
<th>BULK PACK CODE #</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>10.8</td>
<td>62</td>
<td>62</td>
<td>16-130-0120</td>
<td>152.4</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>12.7</td>
<td>62</td>
<td>62</td>
<td>16-130-0580</td>
<td>152.4</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>15.9</td>
<td>62</td>
<td>62</td>
<td>16-130-0340</td>
<td>152.4</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>19.1</td>
<td>50</td>
<td>50</td>
<td>16-130-0340</td>
<td>152.4</td>
</tr>
</tbody>
</table>

SHIELDS 1350 HEAVY DUTY Water/Heater Hose

Shields 1350 HEAVY DUTY Water/Heater Hose has a good bend radius, is fabric reinforced, and has an EPDM tube and cover. This hose is primarily used for critical water connections, heat exchanger, toilet intake, small engine intake, bilge pump intake/discharge, and below water line drains and scuppers. It is resistant to mild chemicals, heat, cold, ozone and saltwater. The temperature ranges from -40°F to 190°F.

<table>
<thead>
<tr>
<th>I.D. MM</th>
<th>O.D. MM</th>
<th>WORKING PRESSURE PSI</th>
<th>WT. °C</th>
<th>BULK PACK CODE #</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>10.8</td>
<td>200</td>
<td>200</td>
<td>16-135-0120</td>
<td>167.6</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>12.7</td>
<td>200</td>
<td>200</td>
<td>16-135-0580</td>
<td>137.2</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>15.9</td>
<td>200</td>
<td>200</td>
<td>16-135-0340</td>
<td>121.9</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>19.1</td>
<td>150</td>
<td>150</td>
<td>16-135-1000</td>
<td>91.4</td>
</tr>
<tr>
<td>1&quot;</td>
<td>25.4</td>
<td>129</td>
<td>129</td>
<td>16-160-1000</td>
<td>76.2</td>
</tr>
</tbody>
</table>

SHIELDS 1600 WATER/HEATER HOSE

Shields 1600 Water/Heater Hose has a good bend radius, is fabric reinforced, and has an EPDM tube and cover. This hose is primarily used for critical water connections, heat exchanger, toilet intake, small engine intake, bilge pump intake/discharge, and below water line drains and scuppers. It is resistant to mild chemicals, heat, cold, ozone and saltwater. The temperature ranges from -40°F to 190°F.

<table>
<thead>
<tr>
<th>I.D. MM</th>
<th>O.D. MM</th>
<th>WORKING PRESSURE PSI</th>
<th>WT. °C</th>
<th>BULK PACK CODE #</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>10.8</td>
<td>250</td>
<td>250</td>
<td>16-160-0380</td>
<td>152.4</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>12.7</td>
<td>250</td>
<td>250</td>
<td>16-160-0120</td>
<td>137.2</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>15.9</td>
<td>250</td>
<td>250</td>
<td>16-160-0580</td>
<td>121.9</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>19.1</td>
<td>200</td>
<td>200</td>
<td>16-160-0340</td>
<td>91.4</td>
</tr>
<tr>
<td>1&quot;</td>
<td>25.4</td>
<td>200</td>
<td>200</td>
<td>16-160-1000</td>
<td>76.2</td>
</tr>
<tr>
<td>1 1/4&quot;</td>
<td>31.8</td>
<td>200</td>
<td>200</td>
<td>16-160-1140</td>
<td>61.0</td>
</tr>
</tbody>
</table>
SHIELDS MARINE EXHAUST/WATER HOSE (NO WIRE)

Shields Marine Exhaust / Water Hose is reinforced with 2 or 4 plies of synthetic cord and is made of black, heavy-walled synthetic rubber. This hose is primarily used for straight connections in wet exhaust systems and engine water circulation lines. It is resistant to engine heat, exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. This hose also has double the ozone resistance required by SAEJ2006. The temperature ranges from -20°F to 200°F continuous, +250°F intermittent. The hose meets SAE J2006 Type R1 standards.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>O.D.</th>
<th>PLY</th>
<th>WT. &quot;C&quot;</th>
<th>50&quot; COIL CODE #</th>
<th>12 1/2&quot; LENGTH CODE #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8&quot;</td>
<td>13</td>
<td>7/64&quot;</td>
<td>2</td>
<td>24</td>
<td>16-200-0120</td>
<td>16-200-0124</td>
</tr>
<tr>
<td>5/32&quot;</td>
<td>16</td>
<td>1 1/32&quot;</td>
<td>2</td>
<td>33</td>
<td>16-200-0580</td>
<td>16-200-0584</td>
</tr>
<tr>
<td>3/32&quot;</td>
<td>19</td>
<td>1 1/alle&quot;</td>
<td>2</td>
<td>37</td>
<td>16-200-0340</td>
<td>16-200-0344</td>
</tr>
<tr>
<td>1/8&quot;</td>
<td>22</td>
<td>1 1/alle&quot;</td>
<td>2</td>
<td>42</td>
<td>16-200-0780</td>
<td>16-200-0784</td>
</tr>
<tr>
<td>1&quot;</td>
<td>25</td>
<td>1 1/alle&quot;</td>
<td>2</td>
<td>48</td>
<td>16-200-1000</td>
<td>16-200-1004</td>
</tr>
<tr>
<td>1 1/8&quot;</td>
<td>28</td>
<td>1 1/alle&quot;</td>
<td>2</td>
<td>52</td>
<td>16-200-1180</td>
<td>16-200-1184</td>
</tr>
<tr>
<td>1 1/4&quot;</td>
<td>32</td>
<td>1 6/alle&quot;</td>
<td>2</td>
<td>60</td>
<td>16-200-1140</td>
<td>16-200-1144</td>
</tr>
<tr>
<td>1 5/8&quot;</td>
<td>33</td>
<td>1 4/alle&quot;</td>
<td>2</td>
<td>62</td>
<td>16-200-1560</td>
<td>16-200-1564</td>
</tr>
<tr>
<td>1 3/4&quot;</td>
<td>35</td>
<td>1 1/alle&quot;</td>
<td>2</td>
<td>66</td>
<td>16-200-1380</td>
<td>16-200-1384</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>38</td>
<td>1 1/alle&quot;</td>
<td>2</td>
<td>70</td>
<td>16-200-1120</td>
<td>16-200-1124</td>
</tr>
<tr>
<td>1 5/16&quot;</td>
<td>42</td>
<td>2 1/alle&quot;</td>
<td>2</td>
<td>77</td>
<td>16-200-1580</td>
<td>16-200-1584</td>
</tr>
<tr>
<td>1 7/8&quot;</td>
<td>45</td>
<td>2 1/alle&quot;</td>
<td>2</td>
<td>82</td>
<td>16-200-1340</td>
<td>16-200-1344</td>
</tr>
<tr>
<td>2&quot;</td>
<td>48</td>
<td>2 3/alle&quot;</td>
<td>2</td>
<td>96</td>
<td>16-200-1780</td>
<td>16-200-1784</td>
</tr>
<tr>
<td>2 1/4&quot;</td>
<td>51</td>
<td>2 5/alle&quot;</td>
<td>2</td>
<td>102</td>
<td>16-200-2000</td>
<td>16-200-2004</td>
</tr>
<tr>
<td>2 1/2&quot;</td>
<td>54</td>
<td>2 1/alle&quot;</td>
<td>2</td>
<td>107</td>
<td>16-200-2180</td>
<td>16-200-2184</td>
</tr>
<tr>
<td>2 3/8&quot;</td>
<td>58</td>
<td>2 1/alle&quot;</td>
<td>2</td>
<td>114</td>
<td>16-200-2140</td>
<td>16-200-2144</td>
</tr>
<tr>
<td>2 7/8&quot;</td>
<td>60</td>
<td>2 1/alle&quot;</td>
<td>2</td>
<td>132</td>
<td>16-200-2380</td>
<td>16-200-2384</td>
</tr>
<tr>
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Special Order

This certification provides unbiased, third party confirmation worldwide that these Shields hoses meet the highest standards of production quality. Certification ensures the proper level of product safety and inspires user confidence.
Shields Nautiflex Silicone Exhaust Hose has a blue silicone cover with a smooth finish for easy clean up. This hose is flexible, easy to install and has four plies of synthetic fabric. It also remains stable at elevated temperatures. This hose is primarily used for straight connections in the wet exhaust system and engine water circulation lines. The temperature ranges from –20°F to 350°F. The hose meets SAE J2006 Type R1 and ISO 13363:2004 – Type 2 – Class B standards.

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### SHIELDSFLEX II MARINE WATER/EXHAUST HOSE (W/ WIRE)

Shieldsflex II Marine Water/Exhaust Hose has a black synthetic rubber tube and cover. It is reinforced with wire helix imbedded between plies of HD synthetic cord. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. This hose is abrasion and odor permeation resistant. It now has double the ozone resistance required by the SAEJ2006. Shieldsflex II is primarily used for engine intake, wet exhaust connections (use where bends or long lengths are required), bilge pump intake/discharge, scupper lines, toilet intake/discharge, and holding tank vent/pump out. The temperature ranges from -20°F to 200°F continuous, 250°F intermittent. The hose meets SAE J2006 Type R2 standards. Bend Radius = 5 x I.D.

#### Specification Table

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SHIELDSAUST-C

Now double the ozone resistance required by SAEJ2006

Shieldsaust – C Hose has a black synthetic rubber tube and cover. It is reinforced with double wire helix imbedded between plies of synthetic cord and is abrasion resistant. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze, and saltwater. This hose is primarily used for wet exhaust connections with significant bends, engine intake and scupper lines. The temperature ranges from -20°F to 200°F continuous, 250°F intermittent. The hose now has double the ozone resistance required by SAEJ2006. This hose meets SAE J2006 Type R2 standards. Bend Radius = 4 x I.D.

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Shields Nautiflex Corrugated Silicone Exhaust Hose has a blue silicone tube and cover with a smooth finish for easy cleaning. The hose is wire reinforced and will not collapse under suction or in a bend. The corrugated cover allows the hose to bend for easy installation. The Nautiflex, two ply construction, has wire captured between fabric plies. This hose is primarily used for main engine exhaust, generator exhaust, engine coolant circulation, engine intake and generator intake. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. The hose remains stable at elevated temperatures. The temperatures ranges from -20°F to 350°F. This hose meets SAEJ2006 Type R2 and ISO 13362:2004 – Type 1 – Class B standards. Bend Radius = 4 x I.D.

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SHIELDS COMFLEX - ALL IN ONE HOSE FOR INSPECTED VESSELS

Shields Comflex is a versatile wire reinforced hose specially designed for inspected vessels. Comflex is rated for fuel, vital water and non-vital water systems on boats requiring SAE J1942 hoses. Applications include bilge, coolant, oil and fuel systems using gasoline, gasohol, diesel, bio-diesel, wet exhaust systems, non-potable water systems, engine intake, toilet and holding tank connections.

Tube: Black Nitrile
Reinforcement: 2 textile plies w/ dual wire helix
Cover: Black Chlorprene
Temp. Range: -20F to 212F

Specifications - SAE J1942 Code F, VW, NVW; SAE J1527 A1; SAE J2006 R2; SAE 20R2 B; SAE J20R4 B; SAE 20R5 B, SAE 30R5, ISO 7840 A1

Additional sizes available. 150’ minimum order.
**SHIELDS MULTIFLEX**

Shields Multiflex Hose has a clear FDA formula PVC with black vinyl helix. It is abrasion resistant, flexible and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump discharge, potable water tank fill and drains (sinks, shower, livewell and scupper). This hose uses 147 right hand thread cuffs.

Do not attach to thru hull fitting below the water line. Do not use ethylene glycol based antifreeze in hose.

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**SHIELDS VAC EXTRA HEAVY DUTY/FDA**

Shields Vac Extra Heavy Duty/FDA Hose has a smooth white FDA grade PVC with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals, permeation, and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, potable water tank fill, and sanitation (toilet to holding tank, intake, self draining lines vent and pump out). This hose is resistant to odor permeation.

Do not use ethylene glycol based antifreeze in hose. Do not use in pressurized water systems.

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SHIELDS LIVEWELL HOSE

Shields Livewell Hose has a black smooth cover with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, and sanitation (intake and vent). This hose is utilized for below the waterline connections.

Do not use ethylene glycol based antifreeze in hose. Not for potable water.

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SHIELDS PVC TUBING - CLEAR

Shields Clear PVC Tubing has a single layer FDA formula vinyl. This hose is primarily used for non-pressurized potable water system supply and drain lines (sink, shower, icebox). This hose is NOT for use in hot water or pressurized water systems.

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**SHIELDS ALL CLEAR PVC TUBING POLYESTER REINFORCED (RED-TRACER)**

Shields Clear Polyester Reinforced Red Tracer PVC Tubing has a clear heavy wall FDA formula vinyl. It has a polyester braid reinforcement and 250 PSI burst pressure. This hose is primarily used for pressurized water system supply (hot or cold), drain lines (sink, shower, icebox), wash down pump connections and head intake.

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➀ 100' roll

**SHIELDS BRAIDED WASH DOWN HOSE**

Shields Braided Wash Down Hose has a white FDA formula vinyl tube and clear vinyl cover. It has a polyester braid reinforcement and a 250 PSI burst pressure. This hose has brass ends, is lightweight and easy to handle. This hose is primarily used for dockside wash down and is safe for potable water.

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<tr>
<td>5/8&quot;</td>
<td>75'</td>
<td>5</td>
<td>9.75</td>
<td>16-163-0588</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>100'</td>
<td>5</td>
<td>13.00</td>
<td>16-163-0587</td>
</tr>
</tbody>
</table>
SHIELDS CLEAR WHITE PVC TUBING
POLYESTER REINFORCED (BLUE-TRACER)

Clear White Blue Tracer PVC Tubing has a white FDA formula vinyl tube. It has a clear vinyl cover, polyester braid reinforcement and 250 PSI burst pressure. This hose is primarily used for pressurized water system supply (hot or cold), drain lines (sink, shower, icebox), wash down pump connections and head intake.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>O.D.</th>
<th>Burst Pressure</th>
<th>WT.</th>
<th>°C</th>
<th>BULK PACK</th>
<th>CODE #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>12.7</td>
<td>17.5</td>
<td>250#</td>
<td>10</td>
<td></td>
<td>16-164-0120</td>
<td></td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>15.9</td>
<td>20.6</td>
<td>250#</td>
<td>13</td>
<td></td>
<td>16-164-0580</td>
<td></td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>19.1</td>
<td>23.8</td>
<td>250#</td>
<td>17</td>
<td></td>
<td>16-164-0340</td>
<td></td>
</tr>
</tbody>
</table>

SHIELDS HEAVY DUTY POLYESTER REINFORCED PVC TUBING

Shields Heavy-Duty Polyester Reinforced PVC Tubing has a clear extra heavy wall FDA formula vinyl. It has superior kink resistance and a polyester braid reinforcement. This hose is primarily used for pressurized water system supply (hot or cold), wash down pump connections and head intake.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>O.D.</th>
<th>Burst Pressure</th>
<th>WT.</th>
<th>°C</th>
<th>BULK PACK</th>
<th>CODE #</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>9.5</td>
<td>15.1</td>
<td>750#</td>
<td>5.6</td>
<td>750#</td>
<td>16-164-0120</td>
<td>300&quot;</td>
<td>91.44</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>12.7</td>
<td>19.1</td>
<td>600#</td>
<td>9.2</td>
<td>600#</td>
<td>16-164-0380</td>
<td>300&quot;</td>
<td>91.44</td>
</tr>
<tr>
<td>5/8&quot;</td>
<td>15.9</td>
<td>22.2</td>
<td>600#</td>
<td>13.5</td>
<td>600#</td>
<td>16-164-0120</td>
<td>300&quot;</td>
<td>91.44</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>19.1</td>
<td>25.8</td>
<td>450#</td>
<td>16.2</td>
<td>450#</td>
<td>16-164-0380</td>
<td>300&quot;</td>
<td>91.44</td>
</tr>
<tr>
<td>1&quot;</td>
<td>25.4</td>
<td>33.3</td>
<td>325#</td>
<td>21.1</td>
<td>325#</td>
<td>16-164-0340</td>
<td>300&quot;</td>
<td>91.44</td>
</tr>
<tr>
<td>1 1/8&quot;</td>
<td>31.8</td>
<td>42.1</td>
<td>100#</td>
<td>31.2</td>
<td>100#</td>
<td>16-164-1100</td>
<td>100&quot;</td>
<td>60.96</td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>38.1</td>
<td>49.2</td>
<td>50#</td>
<td>51</td>
<td>50#</td>
<td>16-164-1140</td>
<td>100&quot;</td>
<td>30.48</td>
</tr>
<tr>
<td>1 1/4&quot;</td>
<td>45.8</td>
<td>64.2</td>
<td>100#</td>
<td>65</td>
<td>100#</td>
<td>16-164-1120</td>
<td>100&quot;</td>
<td>30.48</td>
</tr>
</tbody>
</table>
**SHIELDS OIL TANK FILL HOSE**

Shields Oil Tank Fill Hose has a nitrile/PVC blend for excellent oil resistance. It has a flexible corrugated design, smooth bore and a vinyl helix to prevent collapse. It also resists ozone and cold temperature cracking. This hose is primarily used for 2-cycle oil tank fill.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>BEND RADIUS</th>
<th>MM</th>
<th>WT °C</th>
<th>BULK PACK 100' (30.5M) COILS CODE #</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot;</td>
<td>15.9</td>
<td>29/32&quot;</td>
<td>23.0</td>
<td>2</td>
<td>175# 24.0 16-315-0580 (250’ reel)</td>
</tr>
</tbody>
</table>

---

**SHIELDS SILVERADO 2000 FUEL VENT LINE**

Silverado 2000 Fuel Vent Line is primarily used for fuel tank vent (outside the engine compartment) and is for pleasure boats only. The Temperature range is -5 F to 180 F. It meets SAE J1527 Type A2 standards.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>O.D.</th>
<th>MM</th>
<th>PLY</th>
<th>BURST PRESSURE</th>
<th>WT °C</th>
<th>BULK PACK CODE #</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot;</td>
<td>15.9</td>
<td>29/32&quot;</td>
<td>23.0</td>
<td>2</td>
<td>175#</td>
<td>24.0</td>
<td>16-315-0580 (250’ reel)</td>
</tr>
</tbody>
</table>
SHIELDS SILVERADO 4000 OUTBOARD FUEL LINE

CONSTRUCTION
The series 337 fuel lines (Silverado 4000) is the best B1 fuel line in the market place. Utilizing a complex construction technique involving a THV500 barrier layer, a Nitrile jacket, Polyester reinforcement and a CPE cover; we are able to offer a hose that outperforms all competitors. The Silverado 4000 hose has a small O.D., is extremely flexible and easy to clamp. Not only does the Silverado 4000 meet all requirements it has become the only fuel line worthy to be utilized in Sierra’s fuel line assemblies.

Silverado 4000 Outboard Fuel Line is resistant to ethanol blended fuels. This hose is EPA and CARB compliant. Silverado 4000 has a THV barrier layer to prevent permeation, polyester reinforcement for strength and a weather and UV resistant CPE cover. The gray color keeps hose cooler and helps prevent vapor lock. This hose is for above deck primer bulb applications, and is not fire retardant.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>O.D.</th>
<th>MM</th>
<th>WT.</th>
<th>BULK PACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/16&quot;</td>
<td>7.9</td>
<td>1/4&quot;</td>
<td>12.75</td>
<td>7</td>
<td>16-337-0660</td>
</tr>
<tr>
<td>1/8&quot;</td>
<td>7.9</td>
<td>1/4&quot;</td>
<td>12.75</td>
<td>7</td>
<td>16-337-0666</td>
</tr>
<tr>
<td>3/16&quot;</td>
<td>9.5</td>
<td>35/64&quot;</td>
<td>13.72</td>
<td>7.65</td>
<td>16-337-0380</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>9.5</td>
<td>35/64&quot;</td>
<td>13.72</td>
<td>7.65</td>
<td>16-337-0386</td>
</tr>
</tbody>
</table>

Meets SAE J1527 Type B1-15
Meets ISO 8469 B1
SHIELDS FIRE-ACOL FUEL FILL HOSE

Shields Fire – Acol – Fuel Fill Hose resists gasoline/alcohol blends and is compounded for low permeation. Special compound resists cover deterioration due to alcohol fuel resting in hose. It is abrasion resistant and it is reinforced with wire helix imbedded between plies of HD synthetic cord. This imported hose is primarily used for fuel fill (gas or diesel) and is for pleasure boats only. The temperature range is -5°F to 180°F. It meets SAE J1527 Type A2 and ISO 7840 Type A2 NMMA/CE Type Accepted standards.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>O.D. MM</th>
<th>PLY</th>
<th>BURST PRESSURE</th>
<th>WT. “C”</th>
<th>50’ (15.2M) COILS CODE #</th>
<th>12 1/4’ (3.8M) LENGTH CODE #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/8”</td>
<td>38</td>
<td>1 55/64”</td>
<td>48</td>
<td>2</td>
<td>90#</td>
<td>16-350-1120</td>
<td>16-350-1124</td>
</tr>
<tr>
<td>1 5/8”</td>
<td>41.8</td>
<td>2 13/32”</td>
<td>52.0</td>
<td>2</td>
<td>90#</td>
<td>16-350-1580</td>
<td>16-350-1584</td>
</tr>
<tr>
<td>1 7/8”</td>
<td>47.6</td>
<td>2 33/64”</td>
<td>58.0</td>
<td>2</td>
<td>90#</td>
<td>16-350-1780</td>
<td>16-350-1784</td>
</tr>
<tr>
<td>2”</td>
<td>50.8</td>
<td>2 31/64”</td>
<td>63.1</td>
<td>2 90#</td>
<td>121</td>
<td>16-350-2000</td>
<td>16-350-2004</td>
</tr>
<tr>
<td>2 3/8”</td>
<td>60.3</td>
<td>2 27/32”</td>
<td>72.2</td>
<td>2 90#</td>
<td>137</td>
<td>16-350-2380</td>
<td>16-350-2384</td>
</tr>
</tbody>
</table>

SHIELDS FIRE-ACOL “C” FUEL FILL HOSE

Shields Fire – Acol – “C” Fuel Fill Hose resists gasoline/alcohol blends and has a corrugated cover for extra flexibility. This hose is compounded for low permeation and is reinforced with a wire helix imbedded between plies of HD synthetic cord. It is also abrasion resistant. This hose is primarily used for extra flexible fuel fill (gas or diesel) and is for pleasure boats only. The temperature range is -5°F to 180°F. It meets SAE J1527 type A2 and NMMA Type Accepted standards.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>O.D. MM</th>
<th>PLY</th>
<th>BURST PRESSURE</th>
<th>WT. “C”</th>
<th>50’ (15.2M) COILS CODE #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 1/2”</td>
<td>38.1</td>
<td>1 55/64”</td>
<td>48.0</td>
<td>2</td>
<td>90#</td>
<td>16-351-1120</td>
</tr>
</tbody>
</table>
**SHIELDS FUEL FILL HOSE**

Shields Fire – Acol – Fuel Fill Hose resists gasoline/alcohol blends and is compounded for low permeation. It is abrasion resistant and it is reinforced with wire helix imbedded between piles of HD synthetic cord. This imported hose is primarily used for fuel fill (gas or diesel) and is for pleasure boats only. It meets SAE J1527 Type A2 and ISO 7840 Type A2 NMMA/CE Type Accepted standards.

<table>
<thead>
<tr>
<th>I.D. MM</th>
<th>O.D. 51</th>
<th>Ply</th>
<th>Burst Pressure</th>
<th>WT. 'C'</th>
<th>50' (15.2M) Coils Code #</th>
<th>12 ½' (3.8M) Length Code #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ½&quot;</td>
<td>48.0</td>
<td>2</td>
<td>90#</td>
<td>77</td>
<td>16-355-1120</td>
<td>16-355-1124</td>
</tr>
<tr>
<td>2&quot;</td>
<td>63.1</td>
<td>2</td>
<td>90#</td>
<td>111</td>
<td>16-355-2000</td>
<td>16-355-2004</td>
</tr>
</tbody>
</table>

**SHIELDS FIRE-ACOL 15 LOW PERMEATION FUEL HOSE**

Shields Fire-Acol 15 – Low Permeation Fuel Hose has a special design NBR tube with an embedded plastic barrier layer to prevent permeation. The design of this hose provides easy coupling insertion and the NBR/PVC cover is weather and UV resistant. The hose is also polyester reinforced and fire-resistant. This hose is primarily used for fuel feed (gasoline up to 85% ethanol blended fuels/diesel/biodiesel all blends). The temperature range is -20°F to 212°F.

**SAE J1527 Type A1-15**

<table>
<thead>
<tr>
<th>I.D. MM</th>
<th>O.D. MM</th>
<th>Max WP</th>
<th>WT. C</th>
<th>BULK PACK 250° Reel Code #</th>
</tr>
</thead>
<tbody>
<tr>
<td>⅜&quot;</td>
<td>9.5</td>
<td>19.3</td>
<td>100</td>
<td>16-365-0380</td>
</tr>
<tr>
<td>½&quot;</td>
<td>12.7</td>
<td>22.86</td>
<td>100</td>
<td>16-365-0120</td>
</tr>
</tbody>
</table>

This hose complies with EPA and CARB very low permeation requirements. It meets USCG Type A1-15 requirements for pleasure boats, SAE J1527 Type A1-15, ISO 7840 Type A1, and NMMA/CE Type accepted standards.
Shields Low Permeation Marine Fuel Hose has a plastic barrier veneer with an NBR outer layer tube to prevent permeation. This polyester reinforced hose complies with EPA and CARB very low permeation requirements and is weather/UV resistant. This hose is primarily used for fuel feed (gasoline up to 85% ethanol blended fuels/diesel/all bio-diesel blends). It meets USCG Type A1 – 15 requirements for pleasure boats and meets SAE J1527 Type A1-15, ISO 7840 Type A1, and NMMA/CE type accepted standards. The temperature ranges from -20°F to 212°F.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>O.D.</th>
<th>MAX WP</th>
<th>WT. C</th>
<th>BULK PACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4&quot;</td>
<td>6.4</td>
<td>13.72</td>
<td>100</td>
<td>250' REEL</td>
</tr>
<tr>
<td>5/16&quot;</td>
<td>7.9</td>
<td>15.49</td>
<td>100</td>
<td>250' REEL</td>
</tr>
<tr>
<td>3/8&quot;</td>
<td>9.5</td>
<td>17.27</td>
<td>100</td>
<td>250' REEL</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>12.7</td>
<td>20.83</td>
<td>100</td>
<td>250' REEL</td>
</tr>
</tbody>
</table>

Shields Fire-Acol Fuel Vent hose resists gasoline/alcohol blended fuel and is fire resistant. It features a weather/UV resistant NBR/PVC cover. This hose is primarily used for fuel vent lines (gasoline up to 85% ethanol blended fuels/diesel fuels). It meets USCG Type A2 requirements for pleasure boats and meets SAE J1527 Type A2, ISO 7840 Type A2 and NMMA/CE Type accepted standards. The temperature ranges from -20°F to 160°F.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>O.D.</th>
<th>MAX WP</th>
<th>WT. C</th>
<th>BULK PACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8&quot;</td>
<td>15.9</td>
<td>24.38</td>
<td>50</td>
<td>250' REEL</td>
</tr>
</tbody>
</table>

Shields Fire-Acol Fuel Vent hose resists gasoline/alcohol blended fuel and is fire resistant. It features a weather/UV resistant NBR/PVC cover. This hose is primarily used for fuel vent lines (gasoline up to 85% ethanol blended fuels/diesel fuels). It meets USCG Type A2 requirements for pleasure boats and meets SAE J1527 Type A2, ISO 7840 Type A2 and NMMA/CE Type accepted standards. The temperature ranges from -20°F to 160°F.
Shields Comflex is a versatile wire reinforced hose specially designed for inspected vessels. Comflex is rated for fuel, vital water and non-vital water systems on boats requiring SAE J1942 hoses. Applications include bilge, coolant, oil and fuel systems using gasoline, gasohol, diesel, bio-diesel, wet exhaust systems, non-potable water systems, engine intake, toilet and holding tank connections.

**Specifications**

- Tube: Black Nitrile
- Reinforcement: 2 textile plies w/ dual wire helix
- Cover: Black Chloroprene
- Temp. Range: -20F to 212F

Specifications - SAE J1942 Code F, VW, NVW; SAE J1527 A1; SAE J2006 R2; SAE 20R2 B; SAE J20R4 B; SAE 20R5 B, SAE 30R5, ISO 7840 A1

Additional sizes available. 200’ minimum order.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>M.M.</th>
<th>C.D.</th>
<th>PLY</th>
<th>WT. “C”</th>
<th>BEND RADIUS</th>
<th>WP</th>
<th>50’ COIL CODE#</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8”</td>
<td>15.9</td>
<td>1”</td>
<td>2</td>
<td>33</td>
<td>1.5</td>
<td>75</td>
<td>16-321-0580</td>
</tr>
<tr>
<td>1/2”</td>
<td>19.1</td>
<td>1.19”</td>
<td>2</td>
<td>39</td>
<td>1.5</td>
<td>75</td>
<td>16-321-0340</td>
</tr>
<tr>
<td>1”</td>
<td>25.4</td>
<td>1.41”</td>
<td>2</td>
<td>53</td>
<td>2</td>
<td>75</td>
<td>16-321-0900</td>
</tr>
<tr>
<td>1 1/4”</td>
<td>31.8</td>
<td>1.66”</td>
<td>2</td>
<td>64</td>
<td>3</td>
<td>75</td>
<td>16-321-1140</td>
</tr>
<tr>
<td>1 1/2”</td>
<td>38.1</td>
<td>1.91”</td>
<td>2</td>
<td>78</td>
<td>3</td>
<td>75</td>
<td>16-321-1120</td>
</tr>
<tr>
<td>2”</td>
<td>50.8</td>
<td>2.48”</td>
<td>2</td>
<td>118</td>
<td>5</td>
<td>50</td>
<td>16-321-2000</td>
</tr>
</tbody>
</table>
**SHIELDS SANITATION HOSE**

Shields Sanitation Hose is kink resistant and flexible. It has an EPDM tube and cover, it is wire reinforced and has two fabric plies. This sanitation hose is resistant to toilet chemicals, odor permeation, ozone, salt water and heat. This hose is primarily used for toilet to holding tank, holding tank pump out, and maximum resistance to odor permeation. Bend Radius = 5 x I.D.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>O.D.</th>
<th>PLY</th>
<th>PRESSURE</th>
<th>BURST °C</th>
<th>WT.</th>
<th>BULK PACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot;</td>
<td>25</td>
<td>1 1/16&quot;</td>
<td>2</td>
<td>200#</td>
<td>38</td>
<td>16-101-1000</td>
<td></td>
</tr>
<tr>
<td>1 1/4&quot;</td>
<td>38</td>
<td>1 1/8&quot;</td>
<td>2</td>
<td>150#</td>
<td>55</td>
<td>16-101-1120</td>
<td></td>
</tr>
</tbody>
</table>

**SHIELDS POLY X SANITATION HOSE**

Shields Poly X Sanitation Hose has a lifetime warranty against odor permeation. This ultimate sanitation hose combines the flexibility of a rubber hose with the permeation resistance of polyurethane. Poly X can easily be slipped over most fittings and the polyurethane cover is extremely abrasion resistant. This hose has a glossy cover for easy clean up. This hose is primarily used for head to holding tank and holding tank pump out.

The tube is made of smooth, white NBR and is chemical and detergent resistant. The cover is comprised of smooth polyurethane and has a glossy cover. It is heat, weather, ozone and abrasion resistant. Bend Radius = 5 x I.D.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>O.D.</th>
<th>PLY</th>
<th>PRESSURE</th>
<th>BURST °C</th>
<th>WT.</th>
<th>50’ (15.2M) PRESSURE</th>
<th>12 1/2’ (3.8M) PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/4&quot;</td>
<td>19</td>
<td>1 1/16&quot;</td>
<td>2</td>
<td>38</td>
<td>200#</td>
<td>16-105-0340</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1&quot;</td>
<td>25</td>
<td>1 1/8&quot;</td>
<td>2</td>
<td>28</td>
<td>150#</td>
<td>16-105-1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 1/2&quot;</td>
<td>38</td>
<td>1 1/4&quot;</td>
<td>2</td>
<td>28</td>
<td>100#</td>
<td>16-105-1120</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SHIELDS SANITATION HOSE FITTINGS**

Fiberglass reinforced nylon fittings designed to fit Series 101, Series 105 and Series 144 and 148 hoses without heating or special tools. For use in sanitation systems, deck drain systems and water tank fill. Fittings are durable, chemical and fuel resistant, will not rust or cause electrolysis.
**SHIELDS SUPER PVC SANITATION HOSE**

Shields Super PVC Sanitation Hose is smooth off white PVC with a vinyl helix. It contains an anti-fungus/bacterial agent to inhibit odor causing growth. It is resistant to mild chemicals, saltwater, and permeation. This hose is primarily used for toilet to holding tank (self draining lines) and holding tank pump out. It has a five year limited warranty.

**WARNING:** Lines containing raw sewage should be plumbed to be self-draining.

<table>
<thead>
<tr>
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<th>MM</th>
<th>Bend Radius</th>
<th>MM</th>
<th>VAC RATING</th>
<th>WT. °C</th>
<th>BULK PACK</th>
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<td>127.3</td>
<td>28</td>
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</tbody>
</table>

**SHIELDS VAC EXTRA HEAVY DUTY - INDUSTRIAL GRADE**

Shields Vac Extra Heavy Duty/Commercial Grade Hose has a smooth cover and clear FDA formula PVC with a white vinyl helix. It is rated for full vacuum and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, potable water tank fill, drains (sinks, shower, and scupper), livewell intake and drain, and sanitation (intake, vent and pump out). This hose is utilized for below the waterline connections.

**Do not use ethylene glycol based antifreeze in hose. CAUTION - Do not use for potable water.**

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>Bend Radius</th>
<th>MM</th>
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<th>WT. °C</th>
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</table>
Shields Vac Extra Heavy Duty/FDA Hose has a smooth white FDA grade PVC with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals, permeation, and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, potable water tank fill, and sanitation (toilet to holding tank, intake, self draining lines vent and pump out). This hose is resistant to odor permeation.

Do not use ethylene glycol based antifreeze in hose. Do not use in pressurized water systems.

Shields Livewell Hose has a black smooth cover with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, and sanitation (intake and vent). This hose is utilized for below the waterline connections.

Do not use ethylene glycol based antifreeze in hose. Not for potable water.
Shields Vinylvent Ducting Hose is PVC supported by anodized wire helix. It is resistant to UV and the ozone. This hose is primarily used for venting of bilge fumes.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>O.D.</th>
<th>WT/“C”</th>
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<td>4”</td>
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<td>4 1/8”</td>
<td>104.8</td>
<td>16-400-4000W</td>
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<tr>
<td>3”</td>
<td>76.2</td>
<td>3 1/8”</td>
<td>79.4</td>
<td>16-402-3000</td>
</tr>
<tr>
<td>4”</td>
<td>101.6</td>
<td>4 1/8”</td>
<td>104.8</td>
<td>16-402-4000</td>
</tr>
</tbody>
</table>

Shields Extra Heavy Duty Vinylvent has an extra heavy PVC wall. It is supported by vinyl coated helical wire and is resistant to ozone, UV, and corrosion. It is flame resistant and meets the UL 94V standard. This hose is primarily used for venting of bilge fumes.

<table>
<thead>
<tr>
<th>I.D.</th>
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<th>WT/“C”</th>
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<td>76</td>
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<td>4”</td>
<td>102</td>
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Bulk Pack: 3” 6 x 50  4” 4 x 50
**SHIELDS FIBERVENT**

Shields Fibervent is vinyl coated, woven fiberglass hose. It is supported by vinyl coated helical wire and is resistant to ozone, UV, and corrosion. The hose is flame resistant and meets the UL 181 Class 1 standard. This hose is primarily used for venting of bilge fumes and A/C ducting hose. The temperature ranges from -20° F to 250° F.

<table>
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<th>MM</th>
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<th>MM</th>
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<tr>
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<tr>
<td>8 x 25'</td>
<td>2.4x7.6</td>
<td>4&quot;</td>
<td>101.6</td>
<td>4 ¼&quot;</td>
<td>108</td>
<td>20</td>
<td>15</td>
<td>16-450-4000G</td>
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<tr>
<td>8 x 25'</td>
<td>2.4x7.6</td>
<td>5&quot;</td>
<td>127</td>
<td>5 ¼&quot;</td>
<td>133.4</td>
<td>20</td>
<td>17</td>
<td>16-450-5000G</td>
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<tr>
<td>4 x 25'</td>
<td>1.2x7.6</td>
<td>6&quot;</td>
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<td>6 ¼&quot;</td>
<td>158.8</td>
<td>20</td>
<td>19</td>
<td>16-450-6000G</td>
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</table>

**SHIELDS AIR CONDITIONER DUCTING HOSE**

Shields Air Conditioner Ducting Hose has a smooth tube for maximum airflow. This is a vinyl coated, woven fiberglass hose and is supported by vinyl coated helical wire. It is resistant to ozone, UV, and corrosion. The hose is flame resistant and meets the UL 94-V-0 standard. This hose is primarily used for venting of bilge fumes and A/C ducting hose. The temperature ranges from -20° to 200°F.

<table>
<thead>
<tr>
<th>BULK</th>
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<th>MM</th>
<th>O.D.</th>
<th>MM</th>
<th>WT.</th>
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<th>CODE NO.</th>
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<tbody>
<tr>
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<td>76</td>
<td>3 ¼&quot;</td>
<td>82.5</td>
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<tr>
<td>6 x 25'</td>
<td>1.8x7.6</td>
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<td>102</td>
<td>4 ¼&quot;</td>
<td>108</td>
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<tr>
<td>6 x 25'</td>
<td>1.8x7.6</td>
<td>5&quot;</td>
<td>127</td>
<td>5 ¼&quot;</td>
<td>133.4</td>
<td>32</td>
<td>16-460-5000G</td>
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</tr>
<tr>
<td>5 x 25'</td>
<td>1.5x7.6</td>
<td>5&quot;</td>
<td>127</td>
<td>5 ¼&quot;</td>
<td>133.4</td>
<td>32</td>
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<td>152</td>
<td>6 ¼&quot;</td>
<td>158.8</td>
<td>36</td>
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<tr>
<td>2 x 25'</td>
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<td>7&quot;</td>
<td>178</td>
<td>7 ¼&quot;</td>
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<tr>
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<td>7 ¼&quot;</td>
<td>184.2</td>
<td>44</td>
<td>16-460-7000B</td>
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</tr>
</tbody>
</table>
Shields Marine Exhaust/Water Hose (No Wire)

Shields Marine Exhaust / Water Hose is reinforced with 2 or 4 plies of synthetic cord and is made of black, heavy-walled synthetic rubber. This hose is primarily used for straight connections in wet exhaust systems and engine water circulation lines. It is resistant to engine heat, exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. This hose also has double the ozone resistance required by SAEJ2006. The temperature ranges from -20°F to 200°F continuous, 250°F intermittent. The hose meets SAE J2006 Type R1 standards.

This certification provides unbiased, third party confirmation worldwide that these Shields hoses meet the highest standards of production quality. Certification ensures the proper level of product safety and inspires user confidence.

**I.D.** | **O.D.** | **W.P.S.I.** | **50' Coil Code #** | **12 1/2' Length Code #**
--- | --- | --- | --- | ---
1/4" | 13 | 1/4" | 2 | 24 | 16-200-0120 | 16-200-0124
1/8" | 16 | 1 1/16" | 2 | 33 | 16-200-0580 | 16-200-0584
3/32" | 19 | 1 3/64" | 2 | 37 | 16-200-0340 | 16-200-0344
7/32" | 22 | 1 7/64" | 2 | 42 | 16-200-0780 | 16-200-0784
1/4" | 25 | 1 5/64" | 2 | 48 | 16-200-1000 | 16-200-1004
3/16" | 28 | 1 5/16" | 2 | 52 | 16-200-1180 | 16-200-1184
5/32" | 32 | 1 1/64" | 2 | 60 | 16-200-1140 | 16-200-1144
7/32" | 33 | 1 1/64" | 2 | 62 | 16-200-1560 | 16-200-1564
1/4" | 35 | 1 7/64" | 2 | 66 | 16-200-1380 | 16-200-1384
3/32" | 38 | 1 7/64" | 2 | 70 | 16-200-1120 | 16-200-1124
1/4" | 42 | 2 3/64" | 2 | 77 | 16-200-1580 | 16-200-1584
5/32" | 45 | 2 7/64" | 2 | 82 | 16-200-1340 | 16-200-1344
1/4" | 48 | 2 21/64" | 2 | 96 | 16-200-1780 | 16-200-1784
3/16" | 51 | 2 31/64" | 2 | 102 | 16-200-2000 | 16-200-2004
1/4" | 54 | 2 15/64" | 2 | 107 | 16-200-2180 | 16-200-2184
3/16" | 58 | 2 19/64" | 2 | 114 | 16-200-2140 | 16-200-2144
1/4" | 60 | 2 1/16" | 2 | 132 | 16-200-2380 | 16-200-2384
3/32" | 63 | 3" | 2 | 136 | 16-200-2120 | 16-200-2124
1/2" | 67 | 3 3/8" | 2 | 147 | – | 16-200-2584
3/16" | 70 | 3 3/8" | 2 | 152 | – | 16-200-2344
1/2" | 73 | 3 7/8" | 2 | 174 | 16-200-2780 | 16-200-2784
3/4" | 76 | 3 9/16" | 2 | 182 | 16-200-3000 | 16-200-3004
1/2" | 80 | 3 11/16" | 2 | 190 | – | 16-200-3184
3/8" | 90 | 4 7/64" | 2 | 198 | – | 16-200-3124
3/4" | 95 | 4 9/64" | 2 | 221 | – | 16-200-3344
1/2" | 102 | 4 11/16" | 4 | 229 | – | 16-200-4004
1/2" | 114 | 5 1/8" | 2 | 300 | – | 16-200-4124
1/2" | 127 | 5 1/2" | 2 | 332 | – | 16-200-5004
1/2" | 140 | 6 1/8" | 2 | 396 | – | 16-200-5124
1/2" | 152 | 6 11/16" | 2 | 427 | – | 16-200-6004
5/8" | 203 | 8 27/64" | 4 | 670 | – | 16-200-8004
1" | 254 | 10 1/4" | 4 | 934 | – | 16-200-10004
1 1/2" | 305 | 12 1/8" | 4 | 1095 | – | 16-200-12004
1 3/4" | 350 | 14 1/8" | 4 | 1430 | – | 16-200-14004*

* Special Order
### Shields Nautiflex Silicone Exhaust Hose

Shields Nautiflex Silicone Exhaust Hose has a blue silicone cover with a smooth finish for easy clean up. This hose is flexible, easy to install and has four plies of synthetic fabric. It also remains stable at elevated temperatures. This hose is primarily used for straight connections in the wet exhaust system and engine water circulation lines. The temperature ranges from –20°F to 350°F. The hose meets SAE J2006 Type R1 and ISO 13363:2004 – Type 2 – Class B standards.

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<th>WT. °C</th>
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<th>6’ (1.8M) LENGTH CODE No.</th>
<th>12’ (3.7M) LENGTH CODE No.</th>
</tr>
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<td>16-202-1004</td>
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<td>1 1/8&quot;</td>
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<td>16-202-6004</td>
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Shieldsflex II Marine Water/Exhaust Hose (W/ Wire)

Now double the ozone resistance required by SAEJ2006

<table>
<thead>
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<th>MM</th>
<th>O.D.</th>
<th>PLY</th>
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</tr>
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<td>3/4”</td>
<td>19</td>
<td>1 1/8”</td>
<td>2</td>
<td>32</td>
<td>16-250-0340</td>
<td>16-250-0344</td>
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Shieldsflex II Marine Water/Exhaust Hose has a black synthetic rubber tube and cover. It is reinforced with wire helix imbedded between plies of HD synthetic cord. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. This hose is abrasion and odor permeation resistant. It now has double the ozone resistance required by the SAEJ2006. Shieldsflex II is primarily used for engine intake, wet exhaust connections (use where bends or long lengths are required), bilge pump intake/discharge, scupper lines, toilet intake/discharge, and holding tank vent/pump out. The temperature ranges from -20°F to 200°F continuous, 250°F intermittent. The hose meets SAE J2006 Type R2 standards. Bend Radius = 5 x I.D.
**SHIELDSHAUST-C**

Now double the ozone resistance required by SAEJ2006

Shieldsaust – C Hose has a black synthetic rubber tube and cover. It is reinforced with double wire helix imbedded between plies of synthetic cord and is abrasion resistant. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze, and saltwater. This hose is primarily used for wet exhaust connections with significant bends, engine intake and scupper lines. The temperature ranges from -20°F to 200°F continuous, 250°F intermittent. The hose now has double the ozone resistance required by SAEJ2006. This hose meets SAE J2006 Type R2 standards. Bend Radius = 4 x I.D.

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Shields Nautiflex - Corrugated Silicone Exhaust Hose has a blue silicone tube and cover with a smooth finish for easy cleaning. The hose is wire reinforced and will not collapse under suction or in a bend. The corrugated cover allows the hose to bend for easy installation. The Nautiflex, two ply construction, has wire captured between fabric plies. This hose is primarily used for main engine exhaust, generator exhaust, engine coolant circulation, engine intake and generator intake. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. The hose remains stable at elevated temperatures. The temperatures ranges from -20°F to 350°F. This hose meets SAEJ2006 Type R2 and ISO 13362:2004 – Type 1 – Class B standards. Bend Radius = 4 x I.D.

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SHIELDS COMFLEX - ALL IN ONE HOSE FOR INSPECTED VESSELS

Shields Comflex is a versatile wire reinforced hose specially designed for inspected vessels. Comflex is rated for fuel, vital water and non-vital water systems on boats requiring SAE J1942 hoses. Applications include bilge, coolant, oil and fuel systems using gasoline, gasohol, diesel, bio-diesel, wet exhaust systems, non-potable water systems, engine intake, toilet and holding tank connections.

Tube: Black Nitrile
Reinforcement: 2 textile plies w/ dual wire helix
Cover: Black Chlorprene
Temp. Range: -20F to 212F

Specifications - SAE J1942 Code F, VW, NVV; SAE J1527 A1; SAE J2006 R2; SAE 20R2 B; SAE J20R4 B; SAE 20R5 B, SAE 30R5, ISO 7840 A1

Additional sizes available. 150’ minimum order.

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<th>BEND RADIUS</th>
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<th>50’ COIL</th>
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## Shields Silicone Couplers
- Single & Double Hump W/ Reinforced Fabric

Shields Single and Double Hump Couplers have a blue silicone cover with a smooth finish for easy clean up and are fabric reinforced. The couplers remain stable at elevated temperatures and provide angular and longitudinal vibration absorption in wet exhaust systems. Shields couplers correct slight offsets in pipes. They are resistant to exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. The temperature range is -20°F to 350°F. It meets SAE J2006 Type R1 standards.

### Single Hump

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### Double Hump

Shields Silicone Single and Double Hump Couplers are very high temperature silicone exhaust connectors. The maximum operating temperature is 450°F (232°C). It meets SAE J2006 Type R1 standards.

### Single Hump

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**SHIELDS EPDM COUPLERS - SINGLE HUMP**

100% High temperature EPDM rubber. Maximum operating temperature 250° F (120° C).

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Also available with series 720 T-bolt clamps. Order part number with "Kit" Suffix.
SHIELDS EXHAUST PROTECTOR VALVES

Specially compounded rubber flapper valves designed to prevent water from entering the exhaust system in following seas or when backing down. Made with weather resistant EPDM with U/V stabilizer.

SHIELDS EXHAUST HOSE CLAMPS T-BOLT BAND CLAMPS

These exhaust hose clamps are designed to fit Shields series 200, 250, and are perfect for any application below the water line. The band is 316 stainless steel and is .025 thick by .75 wide. Other hardware includes an extra long 1/4” bolt and a nylon inset locknut. The bolt, nut and trunion are 18-8 (304) stainless steel. Maximum torque of 75 inch pounds.

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<td>18-720-3120</td>
</tr>
<tr>
<td>4.18 - 4.84</td>
<td>106.2 - 122.9</td>
<td>4”</td>
<td>101.6</td>
<td>18.8</td>
<td>18-720-4000</td>
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<tr>
<td>4.25 - 4.91</td>
<td>108.0 - 124.7</td>
<td>4 1/4”</td>
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<td>18.9</td>
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<tr>
<td>4.75 - 5.41</td>
<td>120.7 - 137.4</td>
<td>4 1/2”</td>
<td>114.3</td>
<td>20</td>
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<tr>
<td>4.68 - 5.34</td>
<td>118.9 - 135.6</td>
<td>4 1/4”</td>
<td>114.3</td>
<td>20</td>
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<tr>
<td>5.30 - 5.96</td>
<td>134.8 - 151.4</td>
<td>5”</td>
<td>127.0</td>
<td>22</td>
<td>18-720-5000</td>
</tr>
<tr>
<td>5.18 - 5.84</td>
<td>131.6 - 148.3</td>
<td>5”</td>
<td>127.0</td>
<td>22</td>
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<td>5.75 - 6.41</td>
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<td>139.7</td>
<td>25</td>
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<td>5.68 - 6.34</td>
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<td>6.38 - 7.04</td>
<td>162.1 - 178.8</td>
<td>6”</td>
<td>152.4</td>
<td>27</td>
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<td>6.18 - 6.84</td>
<td>157.0 - 173.7</td>
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<td>8.42 - 9.08</td>
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<td>207.8 - 224.5</td>
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<td>10.45 - 11.11</td>
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<td>14.50 - 15.16</td>
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<td>41.1</td>
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* Designed to fit Series 202 silicone exhaust hose
FERRULE VISE/DIES

Hand operated vise for making fuel line assemblies without clamps. Vise uses ordinary barbed fittings with series 700 solid brass ferrules. Makes professional looking leak proof fuel lines. Furnished with removable handle. Dies must be ordered separately. When ordering dies, please consult chart under brass ferrules to determine proper size.

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<thead>
<tr>
<th>PART NO.</th>
<th>DESCRIPTION</th>
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<tr>
<td>No. 18-J-662-xxx</td>
<td>Dies give longitudinal crimp.</td>
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<td>No. 18-J-664-xxx</td>
<td>Dies give circular and longitudinal crimp.</td>
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<td>No. 18-J-VISE</td>
<td>Vise (w/o dies)</td>
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<td>* Special Order Only</td>
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45° SAE FEMALE SWIVEL

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<th>THREAD</th>
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<td>1/4&quot;</td>
<td>5/16-20</td>
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<tr>
<td>18-502-5678</td>
<td>5/16&quot;</td>
<td>5/16&quot;</td>
<td>1/8-18</td>
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<tr>
<td>18-502-1234</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>3/4-16</td>
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<td>18-502-1278</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
<td>3/4-14</td>
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Standard Package: 100 pieces

ADAPTER — MALE PIPE TO SAE 45° FLARE

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<th>TUBE</th>
<th>PIPE</th>
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<td>1/4&quot;</td>
</tr>
<tr>
<td>18-600-5618</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
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<tr>
<td>18-600-3818</td>
<td>3/8&quot;</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td>18-600-3838</td>
<td>3/8&quot;</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td>18-600-1212</td>
<td>1/2&quot;</td>
<td>1/2&quot;</td>
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<tr>
<td>18-600-5612</td>
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Standard Package: 100 pieces

ADAPTER — MALE PIPE TO SAE 45° FLARE 90°

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Standard Package: 100 pieces

MALE PIPE

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<td>18-500-1414</td>
<td>18-8042</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
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<td>18-500-5618</td>
<td>18-8054</td>
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<td>18-500-3812</td>
<td>18-8073</td>
<td>3/32&quot;</td>
<td>3/32&quot;</td>
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<td>18-500-3814</td>
<td>18-8074</td>
<td>3/32&quot;</td>
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<td>18-8108</td>
<td>5/32&quot;</td>
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<td>18-500-1212</td>
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<td>1/2&quot;</td>
<td>1/2&quot;</td>
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<td>18-500-5838</td>
<td>18-8041</td>
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STD. PKG. 100

SOLID BRASS FERRULES

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<th>WT.</th>
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<td>16-368-0140</td>
<td>550</td>
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<tr>
<td>18-700-6250</td>
<td>16-368-0560</td>
<td>625</td>
<td>—</td>
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<td>18-700-6500</td>
<td>16-368-0120</td>
<td>675</td>
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<td>18-700-6750</td>
<td>16-368-0380</td>
<td>700</td>
<td>—</td>
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<td>18-700-7250</td>
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<td>725</td>
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<td>18-700-7500</td>
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<td>16-365-0800</td>
<td>775</td>
<td>—</td>
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<td>18-700-8250</td>
<td>16-368-0120</td>
<td>825</td>
<td>—</td>
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<td>18-700-8500</td>
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<tr>
<td>18-700-9250</td>
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<td>900</td>
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STD. CTN. 12 (1 PER CARD)
SHIELDS FLAME RETARDANT SPLIT WIRE CONDUIT

Flame retardant polypropylene is black with a blue stripe. It provides chafing protection for wiring systems and is split longitudinally for easy access to harness. It has a temperature range of 275°F. It meets ABYC standard 8.15.19. and UL 94 V2.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>WT. °C</th>
<th>CODE #</th>
<th>PACK</th>
<th>M</th>
<th>100’ (30.1M) R/O CTN. CODE #</th>
<th>50’ (15.2M) R/O CTN. CODE #</th>
<th>50’ (15.2M) BOX CODE #</th>
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<tbody>
<tr>
<td>1/4&quot;</td>
<td>6.4</td>
<td>1.26</td>
<td>16-128-0140B</td>
<td>3200’</td>
<td>975</td>
<td>16-128-0147B</td>
<td>16-128-0146B</td>
<td>16-128-0146B-1</td>
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<tr>
<td>3/8”</td>
<td>9.5</td>
<td>1.58</td>
<td>16-128-0380B</td>
<td>1800’</td>
<td>549</td>
<td>16-128-0387B</td>
<td>16-128-0386B</td>
<td>16-128-0386B-1</td>
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<tr>
<td>1/2”</td>
<td>12.7</td>
<td>2.31</td>
<td>16-128-0120B</td>
<td>1100’</td>
<td>335</td>
<td>16-128-0127B</td>
<td>16-128-0126B</td>
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<td>5/8”</td>
<td>15.9</td>
<td>2.94</td>
<td>16-128-0580B</td>
<td>750’</td>
<td>229</td>
<td>16-128-0587B</td>
<td>16-128-0586B</td>
<td>16-128-0586B-1</td>
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<tr>
<td>1”</td>
<td>25.4</td>
<td>5.78</td>
<td>16-128-1000B</td>
<td>300’</td>
<td>91</td>
<td>16-128-1007B</td>
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<td>16-128-1006B-1</td>
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<tr>
<td>1 1/4”</td>
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<td>9.24</td>
<td>16-128-1140B</td>
<td>200’</td>
<td>61</td>
<td>16-128-1147B</td>
<td>16-128-1146B</td>
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<tr>
<td>1 1/2”</td>
<td>38.1</td>
<td>15.23</td>
<td>16-128-1120B</td>
<td>100’</td>
<td>31</td>
<td>—</td>
<td>16-128-1126B</td>
<td>—</td>
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<tr>
<td>2”</td>
<td>50.8</td>
<td>21.00</td>
<td>16-128-2000B</td>
<td>100’</td>
<td>31</td>
<td>—</td>
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</table>

SHIELDS STERNFLEX

Shields Sternflex has a polyethylene co-polymer wall with an integral polyethylene helix. It is resistant to abrasion, crushing and UV. This hose is primarily used as a cover for the harness and for the hoses on the bracket mounted on outboard engines.

<table>
<thead>
<tr>
<th>I.D.</th>
<th>MM</th>
<th>BEND RADIUS</th>
<th>MM</th>
<th>WT. °C</th>
<th>BULK PACK 50’ (15.2M) LENGTH CODE NO.</th>
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<td>2”</td>
<td>50.8</td>
<td>3</td>
<td>76.2</td>
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RIGGING FLANGE

18-9761 - Part No. N-189761 - Bulk Part No.
- U/V stabilized black plastic flange
- Use with Shields
2” Sternflex P/N 16-126-2000B

RIGGING HOSE KIT

18-9883 - Part No.
- Hides all engine cables and hoses
- Can be added to any style outboard
- Contains:
  - (1) U/V stabilized flange
  - 5’ 2” Black Sternflex
Solid Neoprene sheet rubber is designed for use under fuel tanks to comply with USCG requirements for air space. Also for gaskets, component padding and under wire straps. It can be custom cut to a variety of strips and shapes. It is offered in bulk rolls 36" wide x 10' long.

**BULK SHEET**

<table>
<thead>
<tr>
<th>THICKNESS</th>
<th>MM</th>
<th>WIDTH</th>
<th>MM</th>
<th>LENGTH</th>
<th>M</th>
<th>CODE NO.</th>
<th>PACK</th>
<th>BULK MM</th>
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<td>3/16&quot;</td>
<td>4.8</td>
<td>36&quot;</td>
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<td>10'</td>
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<td>3/8&quot;</td>
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<td>36&quot;</td>
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**SHIELDS SPEEDOMETER PITOT TUBING**

This black vinyl tubing is HW reinforced with a polyester braid and provides a tight connection between your speedometer pickup (Pitot) and your speedometer.

<table>
<thead>
<tr>
<th>NOMINAL I.D.</th>
<th>MM</th>
<th>BRAID</th>
<th>&quot;C&quot;</th>
<th>WT. CODE #</th>
<th>PACK</th>
<th>BULK MM</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0</td>
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<tr>
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<td>4 mm (.157&quot;)</td>
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<td>4.3</td>
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SIERRA CUSTOMER SATISFACTION WARRANTY

Limited Warranty:
SIERRA INTERNATIONAL INC. ("SIERRA") warrants its products to be free of defects in workmanship and materials for the useful life of the product (the "Warranty"). If a SIERRA product fails to comply with the Warranty, SIERRA will repair or replace the defective product free of charge. The Warranty is subject to the additional terms, conditions and limitations set forth below.

Warranty Claims for Professionally Installed Products:
For any SIERRA product that was originally installed on a vessel by a dealer or other professional installer that fails to comply with the Warranty, in addition to repairing or replacing the product free of charge, SIERRA will also reimburse the customer for reasonable labor charges incurred to replace the product, and reasonable towing and other similar incidental expenses incurred as a result of the failure of the product to comply with the Warranty. Labor will be calculated based on the installer’s posted shop rate that is competitive with their local market rates. The original work order along with the original invoice and a copy of the new re-work order must be provided to SIERRA to file a claim for reimbursement of labor expenses. Towing charges will also be paid based on reasonable and customary rates in the local trading area. A copy of the original invoice for the towing service must be provided to SIERRA to file a claim for reimbursement of towing expenses.

ALL PROFESSIONAL INSTALLER WARRANTY CLAIMS MUST BE SUBMITTED IN ACCORDANCE WITH THE FOLLOWING PROCEDURE:

WITHOUT LABOR CLAIM – The dealer must return any allegedly defective SIERRA product to the distributor from whom it was purchased for analysis. The product shall be tagged with the SIERRA part number, date of purchase and the alleged cause of failure. The distributor will then forward the product to SIERRA with a request for credit. If SIERRA determines that the part failed to comply with the Warranty and otherwise qualifies for Warranty coverage under the terms hereof, SIERRA will issue credit for the product to the distributor. The distributor will reimburse the dealer. SIERRA will not issue credit for any products that are not returned to SIERRA. Products not manufactured or distributed by SIERRA will be held for disposition for 30 days.

WITH LABOR CLAIM – All warranty claims for which reimbursement of labor and/or towing expenses is sought are subject to prior authorization. Please call 217-324-9428 to discuss any such claim with a SIERRA representative. In order to process all claims quickly and efficiently, the following must be shipped directly to SIERRA via a traceable and insurable method (i.e. UPS, Federal Express, Registered U.S. Mail, etc.):
1. The allegedly defective product and any related damaged parts.
2. A written estimate detailing the following information:
   a. A complete list, including part numbers of all products required for the warranty repair.
   b. The shop labor rate and a breakdown of the time required for the repair.
   c. The year, model and serial number of the warranted engine or drive.
   d. The name and address of the distributor the products were purchased from.
   e. The name, address and phone number of the customer.
3. The original work order or receipt detailing the initial installation of the allegedly defective product.
4. Any receipts detailing additional expenses.

Failure to provide required documentation and information may void all or part of the Warranty coverage.

Proof of delivery will be required on all lost shipments.
NOTE: Concerning labor claims on older products that cannot be rectified due to the unavailability of OEM replacement parts; SIERRA reserves the right to extend only the market value of the OEM product.

Send claims to:
TECHNICAL SERVICE
SIERRA INTERNATIONAL INC.
1 Sierra Place
Litchfield, IL 62056-3029
(217) 324-9428

Limitations:
THE EXPRESS WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SIERRA does not warrant against, and the Warranty shall be void with respect to, damages or defects arising out of any of the following:
- Improper or abnormal use or handling of SIERRA’s products;
- Installation or use of a SIERRA product in a manner that is inconsistent with SIERRA’s application information, guidelines, instructions and/or specifications;
- Defects in products or components not manufactured by SIERRA;
- Non-SIERRA made products or components;
- SIERRA products transferred from a vessel on which they were originally installed;
- SIERRA products transferred from the engine on which they were originally installed;
- Failure to maintain SIERRA products in accordance with SIERRA’s application information, guidelines, instructions and/or specifications;
- Ordinary wear and tear resulting from the operation and/or use of the SIERRA product.

This warranty also does not apply to products which have been altered or upon which repairs have been affected or attempted by persons other than pursuant to written authorization by SIERRA. In addition, this warranty is only valid with respect to products purchased from Sierra and its authorized dealers and resellers and is not transferable.

THIS STATEMENT OF LIMITED WARRANTY IS NOT A STATEMENT OF THE USEFUL LIFE OF ANY SIERRA PRODUCT. WHEN SIERRA WARRANTS ITS PRODUCTS FOR THE USEFUL LIFE OF THE PRODUCT, THIS DOES NOT GUARANTEE THAT THE PRODUCT WILL LAST FOREVER OR FOR THE LIFE OF THE VESSEL. THE LENGTH OF THE USEFUL LIFE OF SIERRA’S PRODUCTS WILL VARY DEPENDING ON THE TYPE OF PRODUCT, AS SPECIFIED IN SIERRA’S APPLICATION INFORMATION, GUIDELINES, INSTRUCTIONS AND SPECIFICATIONS FOR EACH PARTICULAR PRODUCT. PLEASE REFER TO THE INFORMATION PROVIDED WITH YOUR SIERRA PRODUCT IN ORDER TO DETERMINE THE USEFUL LIFE OF THAT PRODUCT.

The sole and exclusive obligation of SIERRA shall be to repair or replace the defective products in the manner set forth above. SIERRA shall not have any other obligation with respect to the products or any part thereof, whether based on contract, tort, strict liability or otherwise. Under no circumstances, whether based on this Warranty or otherwise, shall SIERRA be liable for any special, punitive or consequential damages.

SIERRA’s employees or representatives’ ORAL OR OTHER WRITTEN STATEMENTS DO NOT CONSTITUTE WARRANTIES, shall not be relied upon by customer, and are not a part of the warranty stated herein.

If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in full force and effect.
BACKED BY THE BEST WARRANTY IN THE MARINE INDUSTRY